THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

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The Cultivator & Country Gentleman.

HYDROPATHY ON THE FARM.

It is not an inappropriate season of the year to say a word or two with regard to IRRIGATION. It has been so often written about, as a recondite and costly process, with elaborate calculations of frightful length, and erudite citations of foreign systems, all the way from Italy to China, —that our Farmers are too much in the habit of regarding the very word as a sort of bugbear, rising on the view amidst the exhalations of submerged rice-fields, or pointing with spectral hand to plains and valleys checkered over with Egyptian conduits and intersected with Dutch canals.

Now, without being altogether disciples of the Grafenberg school, we may yet be permitted to doubt whether the true usefulness of Water is quite appreciated as an agent in maintaining and promoting either the health of men or the fertility of soils. Its efficiency in both respects, has not as yet been fully explained. That certain Springs which Nature has warmed and medicated in the inner chambers of Earth, the kind mother and nurse of us all, should possess curative properties of their own, is not so strange; nor do we wonder that rivers which have washed down the soluble wealth of many a remote hillside, to lavish it on the flats that immediately skirt their course, should render these favored spots inexhaustibly productive. But what virtue there may pertain to clear and limpid water, in itself considered, as a restorative upon the human frame, or as a fertilizer upon the land, it is perhaps not so easy to determine.

The latter question, particularly, is complicated by the conflict of authorities and of experience. Our friend, the present Minister of the United States at the Court of Nicaragua, is fully convinced that none but *soft water* will fertilize the soil, and confidently points to the fact that Nature herself draws this distinction in sending down no other kind in her vivifying rains and refreshing showers. But the equally practical writer on this subject in *Morton's Cyclopædia*, informs us that in Hampshire, England, "waters running over calcareous soils, and *hard*, or abounding in carbonate of lime, *are* used with great success." The former authority, Mr. DICKINSON, takes pains to render the water with which he irrigates, thick and turbid, in order to make it float a top-dressing of finely divided soil all over his meadows; but the English writer carefully distinguishes between the irrigation of meadows and of arable land, and while he says that on the latter "the more thick and turbid the water, the better,"—asserts, as the result of English experience, "that, for grass land, the clearer the water the better; that calcareous matter, taken up in a form *not* to render the water turbid, is almost the only beneficial admixture," and that "when the rivers are turbid from quantities of silt, or of finely divided clay and peat, they injure the grass, especially the former [silt,] but streams flowing clear and pure from the hills are of benefit, and especially from hills abounding in lime."

We are thus met at the outset—in pressing upon the farmer the importance of Irrigation—with a very difficult question to answer: "How am I to know whether the water I have, is of the right kind for the purpose?"

A German pupil of Baron LIEBIG's has lately written an authoritative exposition of the Laws of Agriculture according to the theory of that distinguished investigator, and the only one of them all which he emphasizes in italics, is this: "*There is no absolute rule in Agriculture—everything depends on the circumstances of the case.*" If all of Liebig's philosophy was based on as sure a foundation and backed by as abundant testimony, as this very sensible conclusion is, he would have had fewer critics buzzing about his ears, during the past twenty years.

And our only reply to the interrogatory supposed, is the one which it is so easy to give, and often so difficult to act upon, namely, that each must judge for himself according to the circumstances in which he is situated. But with regard to Irrigation it seems tolerably safe to decide in the affirmative, unless there are unmistakable indications to the contrary—we should be inclined to throw the burden of evidence, as a general rule, upon the negative of the question.

Whether it may be expedient to irrigate with muddy water, or not, there can be no doubt that any material of a fertilizing character can be applied to the land by the agency of water more effective than in any other way. The soil, which is capable of filtering the water of our springs to such crystal purity, appears equally well calculated to absorb, or rather attract, from liquid manures every particle of the fertilizing ingredients that may be floating

in them, and the dissolution, partial or complete, of these ingredients appears to adapt them exactly to the requirements of the plant. And as water carriage, as a general rule, is cheaper than land carriage, it would not be at all surprising if the means should ultimately be developed of carrying our manures over the farm in liquid form, to a much greater extent than has thus far seemed practicable.

It is our belief, to go back to Irrigation pure and simple, that in no other country are there greater reasons or more abundant facilities for its adoption, than throughout many parts of the United States—the former on account of our climate, and the latter because of the frequency of streams which might be employed for the purpose, and because the conformation of the land is so often just what is required to accomplish irrigation at a small cost.

As to the *climate* of the United States, we are subject to extremes of heat and prolonged drouths, which render our country, as compared with Great Britain, as a general rule, less productive of grasses, and much more in need of artificial supplies of moisture. In fact, irrigation in Great Britain is so particularly well attended to by the skies, that comparatively little has been done by man in this direction. It is in such countries as "sunny Italy," and southern Spain, and in China, in all of which there are more points of resemblance to our climate, that irrigation has been found the most serviceable, and where it is now most extensively practiced.

Few people are aware how little the *amount* of rain-fall in the year, has to do with the "moisture" of a climate. As a general rule it may almost be asserted that irrigation is the most necessary *where the rain-fall is greatest.* Thus we find that in Great Britain the amount of rain precipitated in the year varies from 20 and 22 inches in the eastern and middle counties to 30 in the southern and 40 in the western—with a calculated average for the British Islands of 32 inches. At Florence in Italy it is 41⅛ inches. In the United States, the average, varying with local influences *increases as we go southward,** from about 40 inches in New-England and in the North Western States, to 42 in what are now called the "border States," 45 still farther south, and 63 in the latitude of Mobile.

Thus the average rain fall in the United States is probably at least one-third greater than in the United Kingdom, and in many cases fully double. But our rains come in large quantities at once, instead of slowly, and consequently run off more quickly; moreover, during the months in which we have the most rain, namely, August and September, there is a much more rapid evaporation going on, so that the rain which falls is proportionately less available for the purposes of vegetation. Taking the seasons, each by itself, possibly nine persons out of ten would assert that the greatest precipitation occurs in Spring, and the next greatest in Winter, whereas the figures show that the largest amount of moisture falls in Autumn; Summer stands next to Autumn, and Spring is the third, and Winter the fourth and last, on the list. And in this country we have only from fifty to sixty rainy days in the year, against about one hundred and forty in round numbers in Great Britain.

The conclusion to be derived from these considerations is—that if we, who receive the donations of the clouds so much more rarely, although in a quantity absolutely greater, can devise a system by which we shall make up for their rarity by applying moisture to the land for ourselves as it may be needed, we shall go much farther in combining the advantages of a warm sun with those of plentiful moisture, than is possible in a country where the former can never be secured by ingenuity nor bought by money, and where the latter can be increased, but never diminished, by the appliances of art. Heat and moisture are jointly essential to the greatest luxuriance of vegetable growth—neither can accomplish much without the co-operation of the other.

In the frequency with which our farmers can command springs or streams upon a higher level than many of the slopes upon their farms, they possess a great natural advantage for purposes of irrigation.

There are half-a-dozen instances in the employment of Irrigation for farm purposes which we have personally examined, which among others seem to be here especially worthy of notice—four in Great Britain and the other two in this country. Of all of them we have already written at some length in the columns of the COUNTRY GENTLEMAN, so that our allusions now shall be very brief, and merely to recall in a single article what has before been said upon this important topic at various intervals.

The examples to which we refer are those upon the estates of Lord HATHERTON, THOMAS HORSFALL, Esq., and Mr. MECHI in England, upon the noted Edinboro' meadows in Scotland, and on the farms of Mr. DICKINSON in Steuben county, and Mr. L. D. CLIFT, in Putnam county, in this State. The first-mentioned, that of Lord Hatherton, at Teddesley in Staffordshire, is one of considerable expense, securing however drainage as well as irrigation, together with a large water-power, all from the same outlay. The farm concerned, which, at the time of our visit, and for a long period anteriorly had been under the superintendence of Mr. BRIGHT, a very judicious and skillful manager, embraced over thirteen hundred acres, so situated that the drainage outflow from over five hundred acres which was originally a sort of elevated swamp, can be collected in a reservoir, carried through a covered conduit half a mile to the farmstead, where it turns a mill-wheel of 38 feet diameter, and thence passes through a tunnelled channel on to a piece of meadow of 115 acres below, over which it is spread at pleasure by means of permanent channels, and which it has converted from an area comparatively worthless into a never-failing source of grass and hay whatever may be the character of the season. We did not inquire into the details of pecuniary cost and return, but soon after these improvements were first completed, the statement was published that the total cost of underdraining 467 acres, of arranging for the mill, and of the irrigation of eighty-nine acres, had been between thirteen and fourteen thousand dollars, but that the annual rental of the estate was thereby increased over $5,000, so that the handsome interest of thirty-seven per cent. was the clear result of the outlay.

At Mr. HORSFALL'S in Yorkshire, the irrigation comes from a little brook into which the sewage of the village of Burley flows, and is simply performed by being admit-

* Of course this statement is only approximatively correct. The zones of equal rain-fall, instead of running east and west, appear to be more nearly N. E. and S. W., so that the belt of 45 inches precipitation, for example, includes part of the shore line of New England and thence runs southwesterly into eastern Virginia and North Carolina, where it strikes inlan dacross Tennessee and Arkansas. But at almost every point there are so many local peculiarities affecting the case, that even such a statement as this is only true in the broadest and most general sense

ted at the highest point, a gentle knoll in the the meadow of 14 acres, whence furrows having a very gradual descent, carry it over the whole, the water when turned on trickling out from these channels through the grass. It is allowed to run through the winter until March, when the meadow is grazed until May, and then another irrigation ensues to give a start to the hay crop, and after mowing a third flowing takes place. The land is all drained, the lines of pipe-tile running eight yards apart, and from three to four feet deep, the latter depth being found preferable, and having been employed in the drains most recently put down. If there is any surplus in the supply of liquid manure, which is saved at the stables in reservoirs by itself, beyond what is wanted for other purposes, it is taken to a little excavation upon the knoll referred to above, and there mingled with the water used for the irrigation of the meadow.

Our readers are already familiar with the systems pursued at Tiptree Hall and on the Craigentinney meadows. Mr. Mechi was so highly convinced of the increased value of manures when conveyed upon the land in liquid form, that he went to the expense of building cisterns, putting down pipes, and erecting a steam engine to force the dissolved fertilizers, or often water scarcely burdened with fertilizers of any kind, through subterranean channels over his whole farm. The sewage of the city of Edinburgh diluted with the Foul Burn water, carried by channels constructed for the purpose upon the flats overshadowed by "Arthur's Seat," produces such crops of grass, that the milkmen of that canny town, on the 11th of April last, bid off the cutting of it for the season of 1862 at prices varying from £20 to £40 sterling per imperial acre!

As to the system of Irrigation pursued by Mr. DICKINSON on his farm at Hornby, a full account may be found in the CULTIVATOR for 1857, pp. 148, 283. It is quite simple, not costly, and well worth the examination of those interested in the subject. As a mere outline of the method adopted, we may say that the sloping meadow to be irrigated has a furrow carried along its highest part into which the water will flow from the spring or reservoir to be employed for the purpose. The main point requiring care is to lay down this furrow by means of a level, so as to secure a very gentle and regular descent. Other similar furrows, either branching from this, or made by extending this in curves and parallels, to reach as large a part as possible of the surface of the field—are plowed out according to the conformation of the land, and require comparatively little labor with the spade or shovel to secure all the finish that is necessary. In practice the water is admitted into these furrows so as to fill them, and trickle down from their sides over the intermediate spaces. A little exercise of "common sense" and ingenuity, with a clear idea of the object in view, will enable any one to undertake the Irrigation of his meadows according to the requirements of the case, much more easily than directions can be laid down on paper suitable for all localities.

The chief object of this article is to call attention to the beneficial results of Irrigation, and the ease with which they are often to be obtained. There is scarcely any other subject more worthy of discussion, and as a considerable interval has now elapsed since much has been said about it in our columns, we invite the aid of our correspondents to show whether the practice of Irrigation is extending in this and other States, and whether those who may have tried it during the past five years, find its returns upon the degree of labor bestowed, as satisfactory and as remunerative as has been claimed, so far as we are aware, by all who have previously experimented in "Hydropathy on the Farm."

SHORT-HORNS IN ENGLAND.

In the COUNTRY GENTLEMAN of March 27th, we noticed an important shipment of SHORT-HORNS from this country to Great Britain, and in our last number a paragraph was quoted from one of our Dublin exchanges, referring to the arrival there of that part of the shipment sent out by THOMAS RICHARDSON, Esq.

The remainder of the shipment,—sent over by SAMUEL THORNE, Esq.—consisted of four animals, as follows:—

Name.	Calved.	Sire.	Dam.
Duke of Geneva,	Feb. 16, 1860,..	2d Grand Duke,.....	Duchess 71.
Lord Oxford,....	Sept. 16, 1857,.	Duke of Gloster, ...	Oxford 13.
2d Lord Oxford,.	Nov. 8, 1861,...	4th Duke of Thorndale,	do.
Oxford,.....	March 26, 1861,	2d Grand Duke,.....	Maid of Oxford.

The first bull mentioned on this list, the "Duke of Geneva," was bred by JAMES O. SHELDON, Esq., from whom he was purchased some time ago by Mr. THORNE. He was sold to the Hon. Colonel Pennant, M. P., Penrhyn Castle, Bangor, for 600 guineas, (say $3,000.) He is own brother to 2d Duke of Thorndale, sent over last year, and sold at 400 guineas to Messrs. Howard & Robinson.

The second bull, "Lord Oxford," was noticed in high terms in this paper of Feb. 21, 1861, at which time he was in the possession of Hon. FRANCIS M. ROTCH of Otsego. He was bred by Mr. THORNE, and sold to the Duke of Devonshire for 400 guineas (say $2,000.)

"2d Lord Oxford," half-brother of the preceding, and sired by one of the bulls sold in England last year, went to Mr. Atherton of Speke, near Liverpool, for 250 guineas, (say $1,250,) which is not a bad price for a five months' calf.

"Oxford," who "went cheap," according the London *Agricultural Gazette*, owing to being out of condition, was purchased by Mr. Slye of Lancaster, for 150 guineas, ($750.)

The journal just quoted, which is one of the leading agricultural authorities in England, speaks of these sales as affording "another marvellous illustration of the value of good breeding in the Short-Horn world," and of the high prices obtained, as being "sufficiently illustrative of the enormous value of animals of the Duchess and Oxford tribes of Short-Horns," to "deserve a record in the history of the breed."

As the statement has appeared in one of our contemporaries that Mr. THORNE is to be an exhibitor at the grand show which takes place at Battersea Park, London, this summer, under the joint auspices of the Royal Ag. Society of England, and the Highland and Ag. Society of Scotland,—we may state that it was his partial intention to have placed one or more of the above animals in competition on that occasion; but the uncertainty of their attaining proper condition to be exhibited with a fair prospect of success, so soon after a long and trying sea voyage, together with the tempting prices offered for them by ready purchasers immediately upon their arrival, led him to abandon a project, which, under other circumstances, it would have been most creditable both to him and to the country to have adopted. We are glad to be able to state however, that AMERICAN Short-Horns *are likely* to be among the winners at that time—"2d Duke of Airdrie," sent over last autumn by R. A. ALEXANDER, Esq., of Kentucky, having been in course of preparation during the winter and spring, and being now, as we are assured by competent parties, in tip-top order to win. The trial, if fair play is given, will be an interesting one.

—We cannot help repeating the remark in substance, with which our notice of the Thorndale shipment to England last year was accompanied, that these animals are to be spared with great regret from the Short-Horn stock of the country. It would be no matter of surprise, to find the descendants of the very ones which are now sold in England owing to the temporary dullness in the demand for improved stock of all kinds in this country, re-imported to the United States, at still higher prices, in future years by other parties.

AGRICULTURAL STATISTICS.

In advocating the collection of Agricultural Statistics, we have frequently urged that the figures presented by the United States census returns once in ten years, are very far,—in the opinion of those best qualified to judge—very far indeed, from giving anything like a correct picture of our agricultural resources and development.

At the risk of wearying our readers by too frequent recurrence to this subject, we have before us an illustration of the foregoing remark, which we cannot pass by unnoticed. The Report of the Massachusetts State Board of Agriculture for last year, contains the statistics of the State as given in the U. S. Census returns for 1860, together with a comparison between them, and the returns of the State assessors. To this chapter Mr. Secretary FLINT calls our special attention, and we find it fully bears out the statement with which we began. For example—and to carry out the comparison a little farther than is done in the article before us, we note that the U. S. Census reports the agricultural area of the State as follows:

Total Extent of "Improved Land," in acres,	2,213,315
do. do. "Unimproved Land," do.	1,192,296
	3,405,611

But the State Assessment returns, taken about the same time and for the same year, give us quite a different result, as below:—

Acres of Land annually tilled,	265,576
do. do. Orchards, including all kinds of fruit,	41,812
do. Upland Meadow,	550,183
do. Lowland Fresh Meadow,	156,359
	706,542
do. Salt Meadows,	38,543
do. Pasture Land,	1,344,914
	2,397,387
do. Woodland not enclosed as pasture,	976,071
do. Unimproved land,	767,019
	4,140,477

This appears like quite a different territory from that referred to in the census returns—there being an area of 184,000 acres of improved land, and over 550,000 of unimproved, which "Uncle Sam" does not condescend to notice at all. When we come to the domestic animals of the farm, we find quite as striking omissions, with the single exception of swine, the number of which is given in the census as being greater than reported by the assessors:

Total number of HORSES—State assessors,	90,712
do. do. Census returns,	47,679
Discrepancy,	43,033
Total number of Cows—State assessors,	160,982
do do. Census returns,	134,475
Discrepancy,	26,507
Total number of SHEEP—State assessors,	115,671
do. do. Census returns,	113,279
Discrepancy,	2,392

Take the hay crop as another instance in point:

Hay cut in tons—State assessors,	702,285
do. Census returns,	668,628
Discrepancy,	33,657

The article before us calculates that the discrepancies above noted alone make a difference of nearly *five millions of dollars* in the valuation of the State.

The value of the farms themselves, as well as of the live stock upon them, is often greatly underrated, to judge from individual instances referred to, although there is nothing given which proves the general average for the farming lands of the whole State, to be far out of the way. This is a fraction less than thirty-six dollars and fifty cents per acre. With the facts which *are* fully proven, before us, however, we can entirely coincide in the reflection that "these returns, while they are of great value relatively, are yet so far from the actual truth, as to be nearly valueless, except for purposes of comparison, and it is to be regretted that some more perfect plan has not been adopted in these investigations. But so long as the work is entrusted to political favorites, irrespective of other qualifications, rather than to persons specially fitted for such labor, we may well despair of reaching even an approximation to the truth." * * "The average annual produce of butter per cow, is a little less than seven lbs.; of cheese, about five pounds. And yet these items, and such as these, are to be laid before our own people, before the people of other states, and before the world, *as the results of official inquiries into the present condition of the Agriculture of Massachusetts!*"

Can we have fuller evidence than is afforded by such developments as these, of the good that might be accomplished by a National Bureau of Agriculture and Statistics, which should select as its agents and enumerators men qualified for the task, who would undertake it intelligently and carry it out honestly? With such errors in the returns of a single State, by no means one of the largest in the Union, it is easy to conceive how very wide of the mark the grand aggregates of the country are very likely to be. As is intimated above, the only use of our census returns, as they are at present taken, is derived from the supposition that the *average* of mistakes and incapacity will be about equal in different localities and at different periods, and that consequently the figures we have, may fairly serve as the basis of general comparisons. But they should not go before those nations of the world from whom we are deriving, and hope to derive, an immigration of incalculable value in our national growth, as justly representing the capacities and the culture of our country. Either through State or Federal enactments, or both, working in co-operation with each other, we trust that we may eventually get more nearly at the truth.

[For the Country Gentleman and Cultivator.

WIRING FENCE-STAKES.

A writer in the COUNTRY GENTLEMAN, gives his plan for boring fence caps. I think I can tell him of a better way to fasten the stakes than to make wooden caps. In the first place, they are liable to split—2ndly, no two corners require the same length of cap—3rdly, you have to bring all the stakes to a certain size.

Seven years ago I was making a cedar fence with stakes and rider. After setting the stakes without reference to size, and having the fence ready for the top pole, I bought some wire of the size of telegraph wire and annealed it, so that it was quite flexible. I got an iron made (a nail rod is large enough to make it,) six inches long with a hole in each end that readily receives the wire, with one end made at right angles. With this I loop or coil the end around the main wire something as telegraph wires are fastened. With one hand hold of the small loop, and the other hold of the main wire, while an attendant brings the stakes to the desired position, you can draw the wire to such tension as you desire; then give the wire a short turn in the loop; then with file cut the wire, and loop the end back on the main strand. The cost per corner will not exceed one and one-half cents. If the frost raises the stakes, take a beetle, while the ground is soft, and drive them down.

My staking to which I refer, stands as well to-day as when first made. HIRAM WALKER. *Mexico, N. Y.*

☞ The Winnebago Co. (Ill.) Ag. Society has its next Fair at Rockford, Sept. 16—19. President, Dr. H. P. LANE; Secretary, H. P. Kimball.

INQUIRIES ABOUT BARNS.

Messrs. L. Tucker & Son—Being about to build a barn on a plan derived from a design on page 130 of your Annual Register for 1862, I take the liberty of asking several questions on points connected with it, answers to which, if convenient, would confer a favor.

1. Would not a *separate* manure shed be preferable? The space for it in your designs would be otherwise useful. (1.)

2. Are there any objections to the use of rain water from cisterns for horses and cattle? (2.)

3. Is the cistern described on page 139 of same article preferable to a circular one in a corner of the basement?

4. Would either be liable to freezing, and which least so?

5. What access is there to the outside one for cleaning, etc.? (3.)

6. The dimensions of my plan being, length 42 feet, depth 35, height 18, what style of roof would best combine cheapness, utility and looks? (4.)

7. Is 14 feet a good width for the threshing floor, the bays and the stables? (5.) G.

Baltimore Co., Md., April 29.

(1.) The object in placing the shed and space for manure in the basement, is economy. The basement of a barn costs only the excavation and wall—a separate building requires the additional expense of roof and some additional wall. The advantages of comprising all the barn accommodations within a single building are the diminished cost of exterior walls and compactness of accommodation. Hence, if more room is needed, a larger building should be erected. Otherwise, there is no serious objection to a separate building for manure, except the labor of wheeling to it.

(2.) Rain water answers well for cattle, and for horses except a few who are so dainty as not to drink it. Usage however will cause nearly all animals to like it, if it comes from clean roofs, and is kept in frequently cleaned cisterns. It is purer than spring water, so far as relates to mineral ingredients; but brings down some foreign and vegetable matter, which render it less palatable.

(3.) A circular cistern would be more economical of exterior wall material, but would be more difficult to cover properly so as to be secure from any danger of caving in. Both being covered with a foot of earth, they could not freeze. A curb of stone, two feet square, forming what is called a "man-hole," properly covered, would admit cleaning. The best curb is made of chisseled flagging, set on edge, a foot or more high, and reaching the surface of the ground; and a flag-stone fitting the inside and resting on shoulders, at the lower part, and another lying on the top, the intervening space filled with chaff or straw, secures the cistern most completely from the frost. Through this curb, the water pipe may enter, or the pump tube be placed for withdrawing the contents.

(4.) The roofs figured in the Register would be suitable. The truncated gable is a matter of taste, which any one may adopt or reject, as best suits him.

(5.) We see no objection to these dimensions.

[For the Country Gentleman and Cultivator.]

SEASONABLE SUGGESTIONS.

Now, farmers, is the time to look after your mowing machines, horse rakes, hand rakes, forks, &c. See that they are all in proper order, for seed time has come and harvest will soon be here. Take your mowing machines into your work shops the first leisure or rainy day—take the caps of the boxes, and clean all the gum from the bearings that may have collected there. If any has adhered to any part of the machine, take an old knife and scrape it off. Be careful however lest you scrape off the paint from the wood work. Examine all the bolts and nuts, and see that they are in perfect order. If you find any broken, take them out and have them mended at once, for you cannot afford to spend time when mowing has commenced. If your machine has been used a year or two, perhaps it would not be amiss to give it a coat of paint. Take your cutter bar and knives, and see that the knives are all fast and the bar straight, and grind or file your knives sharp. I think grinding is the best if you have a thin stone to grind them on. By putting your machine in good order before haying commences, you are ready to commence haying one or two days before your neighbor—who leaves his machine to fix until the day he wants to commence mowing.

To those readers of the Country Gentleman and Cultivator, who have never used a mowing machine, I would suggest that if your land is smooth enough, buy a mowing machine. You will find it a great saving of labor; you can now buy good machines cheap compared with the prices of a few years ago. Good machines are advertised in this paper.

Be sure and have a good horse-rake. Next to the mowing machine in point of labor-saving, is the horse-rake. See that the teeth in your rake are all sound. If any are broken, slip in a new one. Hard maple makes the best teeth for horse-rakes. It wears smooth and is a good and stiff wood. There are a great many kinds of horse rakes, but I have never seen any that I liked better than the revolving rake. It rakes clean and is less liable to get out of order than some of the other kinds.

Clean out your barns and sheds. Barns and sheds in which you intend to mow your grain and hay, should be thoroughly cleaned of all the hay seed and refuse stuff that will collect about and in them during the winter. By doing this a week or two previous to filling your barns, you give the rats and mice notice to quit, as it leaves no harboring place for them. These and many other things that may be put in proper shape before harvesting commences, will save the trouble of doing it at a time when you have the least time to spare to do it.

Rosendale, May, 1862. S. P. KEATOR.

[For the Country Gentleman and Cultivator.]

TOBACCO AFTER IT IS DRIED.

A method of curing tobacco after it is dried, generally practiced by farmers in Germany, consists in forming a round stack of the same, turning the points or the thin part of the leaves or blades as much as possible outside, and the thick or stemmy part to the inside of the stack. The idea is to warm the tobacco by its own yet containing moisture. Killing or rather curing the greenness of the veins in the blades, and by a certain sweat to improve the flavor and appearance of the article. When warm enough in the middle or the warmest part of the stack, to bear a hand inside without discomfort of heat, it should be taken apart and that part of the stack not warmed up to the point of sweat, be put in the middle for a like cure. Care must be taken not to burn it black, or like ash-burned manure, to which purpose it should be frequently examined. When the above point of curing is attained, it may be laid out thinly to cool off and dry, after which it can be put into whatever shape for market, in bales, casks, hogsheads. By the above process the farmers in Germany manage to cure tobacco, and sell when very successful, the same, at prices often equalling the best sort raised in this country. The stack named must be in doors, on a good plank floor, and accessible to very little air, while in stack. John F. Hillman.

Rare Birds.—The admirers of rare and beautiful birds, are referred to the advertisement of Mr. Giles of Wood stock, Ct., in another page of this paper.

[For the Country Gentleman and Cultivator.]

RAISING LAMBS FOR BUTCHERS—No. 2.

After the ewes are well rested, and used to grass so that there is no danger of over-eating, they may gradually be put on better pasture. At this time an important point is to be aimed at, and kept steadily in view, viz., not to hurry your ewes too fast in the fall, so that the thrift cannot be kept up in the winter, but aim at a constant gain in condition, changing from worse to better, and not from better to worse. Of course if your ewes are good milkers, as they begin to spring bag they will begin to get thin; but this thinness is perfectly natural, and does not interfere with the ewes being in good heart and very thrifty. About the 1st of Oct., I should say,—others, Nov. 1st,—the ram should be turned in.

I have now to write on a delicate matter, but I shall write what I know to be so, and reserve the proof for the future, if it becomes necessary to produce it. In selecting your stock ram then, don't be too pinching, but buy a good one, as it will be money well laid out, and that you will never regret; and by all means buy a South-Down. As I have watched this matter closely for fourteen years, I can say with confidence that no other breed is better or as good. But it does not follow that you need buy of me. There are many good South-Down flocks. I would be glad if there were ten times as many. I might mention Mr. Thorne's of New-York State, Thomas Buffum of Newport, R. I., Mr. John Worth, Westchester, Chester Co., Pa., and very many others; but my readers will notice their advertisements.

When I first commenced with South-Downs, many of our old fashioned farmers would not pay ten dollars for a ram lamb. Since seeing the great advantage, these same farmers have willingly paid $25 for ram lambs, only keeping from 20 to 50 ewes, and will any day tell you that they would not be without a South-Down ram for fifty dollars; but I have said, and say now, that from $15 to $25 is enough for a farmer to pay for a ram lamb just to raise butcher's lambs. Some contend that a Leicester, Cotswold or other long-wool, is as good, but a host of witnesses say they are not. A few years ago many of the Leicesters were scattered in this section, but after a fair trial, the South-Down proved so much better, that I do not know of a single Leicester left. Some of our farmers used both in one season, dividing the ewes equally. The result was that the South-Down cross was fat and sold clean before a single Leicester cross was fit for market. The best of New-York butchers buy lambs in this section; they all say use by all means a full blood South-Down ram. I may here stop to say that all black-faced sheep are not South-Downs, and that the improved South-Down is much better than the common.

Every thing working as it should, by the 1st of March your lambs will commence dropping. I should therefore commence about Feb. 1st, to give the ewes some grain, and gradually increase to half a pint apiece by March 1st—then by April 1st have it increased to one pint of cornmeal or one and a half pints oats. If the ground should be much bare, so that the ewes can get to the ground, they will not need roots before lambing, but if confined to yards on clover hay and cornstalks, I should give about one pound turnips apiece per day, increasing to ten pounds when lambs are four weeks old; but if the ewes can run through April on good sod intended for plowing, they will not need so many roots. Many of our best farmers never feed any roots, but they keep no more sheep than they can keep well; yet it is at this point that roots are of great service, as they help to keep the sheep off the grass intended for pasture until it gets well started, and that almost insures good pasture through the season.

When the lambs are three or four weeks old, they can be learned to eat cornmeal by putting a little in the mouth, mixed with a little salt. After learning a few to eat out of the hand, partition off a pen under shelter by themselves, putting a bottom and top railing across, then nailing pickets on just wide enough to exclude the ewes, and put a small trough within, placing in it some sweet cornmeal, *ground coarse*, and a little salt at first sprinkled on. Your lambs will soon find it out, and if you please to take time, you will find it an advantage to cut some turnips or potatoes up fine for them.

By now giving your ewes plenty to eat, and nursing your lambs, they should be fit for market in June, and the ewes in September worth $1 more than cost, which, with lambs and wool, should pay full $6.50 or $7 per head for ewes wintered, especially if you raise many twins.

Holmdel, N. J. J. C. TAYLOR.

EARLY TRAINING OF COLTS.

Early training on a judicious system is acknowledged to produce the best results with the young. J. F. French of North Hampton, gives in the New-England Farmer, a communication on this subject, from which we abstract the following paragraph:

"I have two colts, one eight months old, and the other one year and eight months. They are both accustomed to the harness. The oldest I have frequently used in the sleigh. On one occasion this winter, when sleighing was good, it has taken me, together with my little son, to Portsmouth and back, a distance of nine miles each way, with no inconvenience or injury whatever. The colt is large of its age, in good condition as to its flesh, and high spirited; and I required it to walk at least two-thirds of the distance each way. It was well fed in the city, taken through streets where it could hear various sounds, and witness all sorts of objects—still it was not suffered to tire, or scarcely to sweat at all, and to every appearance was as lively and bright when I reached home as when I started. To have forced it beyond its strength that distance, or half the distance, would have been injurious—but careful training is always beneficial, and we rarely begin too young with anything."

Lambert Maynard, owner of "Trotting Childers," who has had much experience in raising and training colts, told Mr. F. that "his colts are all broken to the harness before they are a year old, or as he more properly expressed it, educated. He rarely, if ever, uses a whip. As to its injuring them to use them so young, he remarked that he never exercised them so hard as they exercise themselves when alone."

The editor of the Farmer adds: "No suggestion with regard to colts can be more judicious. The highest spirited colt we ever saw we broke in accordance with the suggestions given by Mr. French. We began by putting on the bridle only, and continued through an entire month to add various parts of the harness, until he was perfectly accustomed to every part of it. He was allowed to stand with the harness on from morning until noon, when it was taken off, the colt watered and fed, and after dinner a part or the whole harness put on again. At the end of this time we put him to a light wagon, alone, and drove him a mile, and had no trouble with him afterward."

[For the Country Gentleman and Cultivator.]

SAWDUST AS LITTER FOR STABLES.

Every person who has had any experience in milking in stables, knows how difficult it is to keep the milk free from any foreign matter, which does not add much to its flavor. I have practiced several years, fall and spring, while cows were in milk, to litter my stable with sawdust, by applying at night one bushel to eight cows. I accomplish a triple object by it. It keeps the stable clean; it keeps the cows cleaner; and last, not least, it adds to the manure pile by absorbing the urine of the animals. Let the doubting try it. HIRAM WALKER. *Mexico, N. Y.*

Who is the most unpopular officer with some of the ladies?—General Housework.

[For the Country Gentleman and Cultivator.]

HOW TO SHEAR SHEEP.

Having seen an article on shearing sheep in your paper, which seemed to me was unworkmanlike and behind the times, and hoping that some may be benefitted by a few directions that will be of great value to the beginner, if not to an old hand; and even he, if induced to follow, may give up his tying and the waggon boxes.

Any ordinary floor that the farmer has, where he can have his sheep handy, will answer the purpose. If one man is to shear alone, take some strong material, (gunny bags ripped open are as good as anything,) so that they will make a piece say 6 by 8 feet, or what is better 8 by 10; spread some short straw or any litter that is not too short on the floor, and tack your cloth over it, using common lath or any thin strips to nail through—making the straw as even as you can. If there is to be more than one shearer, it is better to have one bed for each man, but where room is scarce, it will do to have them together. At the end of the day you will find that this will pay. When this is done, and your place swept out, you are ready for the sheep. See that it is clean of all straw and dirt at the door of the pen; lay the sheep down on its right side, rest on your left knee being at the back of the sheep; put your right foot over the sheep, carrying his left fore leg well forward, and with your left hand on his left hind leg pressed well back, you will have your sheep ready for operation. Begin on the upper side of his stomach, and shear lengthwise of the sheep; shear the brisket and the inside of the hind legs—be careful to cut off all of the small locks—(if they are left on they look very bad.) When you have the stomach sheared then you stand astride of the sheep, and with your right hand raise the head a little ways from the bed, and shear with your left hand as far as the back of the neck. Here a beginner may use his right hand occasionally—be careful not to go beyond the back bone.

As you shear, raise the sheep up gradually so that by the time you are at the shoulder you will have the sheep sitting on his rump—then you will be on your right knee with the sheep's head over your left leg and under your arm—shear well down in this position until you have to reach after the wool. Now let the sheep come down gradually, until by the time you are at the hind leg, he will lay flat—then you will be astride of him on your knees, with your right foot over his neck, which will keep him from flouncing. When this side is done, proceed with the other in the same way, but using the right hand—(you will perceive that the fleece is at his back all the time.) If you prefer using your right hand all the time, then lay the sheep on the other side to begin, or some like that way the best where they use the left hand. If the right hand is used all the time, the work will not look as well and evenly.

The way to hold the shears to cut a smooth and even cut, is to grasp the shears partly on the blade, and bring them partly shut, and run them in the wool, having previously drawn the skin smooth where it is inclined to wrinkle—pressing against the sheep—shut the shears but a little way with a draw back at the same time, and if done rightly, it will leave the sheep in handsome ridges of ¼ to 1 inch wide—that will be so close to the skin that it will often sunburn on long wool sheep with the edges about one-quarter of an inch long. Any one who has seen sheep shorn in this way, will gladly give up the old way which leaves some of it nearly an inch long, and with an appearance as if it had been gnawed off, which makes your flock of sheep look badly for a long time.

The tendency to cut the sheep is greatly lessened when shorn in this way. I have shorn a great many in a day, that did not have even a pinch on them. To cut one is the exception, not the rule.

I have written this in hopes that Young Farmer may induce his neighbors to adopt this way, and for any other shearers who may see this. I have seen men at forty give up the Young Farmer's way and learn this method.

April 14th, 1862. ISAAC S. HALLOCK.

[For the Country Gentleman and Cultivator.]

TEACHING CALVES TO DRINK.

Messrs. Editors—In the Co. Gent. of April 24th, A. Moss gave us a very good article on the treatment of cows and calves, but I must beg leave to differ from him with regard to teaching calves to drink. He says that he "backs them up in one corner of the yard or stable, puts their neck between his knees, puts his finger in their mouths, then inserts their nose in the pail, and in this way they soon learn to help themselves." Two years ago I should probably have swallowed the whole of this as "law and gospel," but my experience last spring taught me better doctrine. Having two calves that I wished to separate from the cows, I shut them up in the stable one night after they had sucked, and the next morning I milked in a common wooden pail, and set it before one of them, but it was "no go;" neither of them would eat. At night I milked again and placed it before them, when they drank it in double quick time. I know farmers who regularly practice this mode of treating their calves, and with success. You can add meal to it, and they will eat it as readily as they do the milk. Brother farmers try it, and report progress. F. A. Whitbeck. *Yaphank, L. I.*

[For the Country Gentleman and Cultivator.]

Coarse Flour and Meal for Raising Calves.

It requires no labored argument to convince any farmer at the present day, that it is better for the cow and calf both, that the calf should be brought up separate from the dam; as the teasing and worry of the calf is injurious to her, besides keeping her constantly excited. As it is not good economy to rear them on new milk, it becomes necessary to substitute some other food to mix with the skimmed milk or whey, to make up for the loss of the butter or cheese in the food, and not produce a loose state of the bowels. I have tried scalding corn-meal and corn and rye together; then I have made it into a pudding, as you would for table use—giving them a portion in each meal; but always found more or less difficulty in making them eat it, and when they did, its effect was too loose a state of bowels. For several years I have used a coarse flour, which I could buy at the same price of corn-meal, and use it uncooked. It readily mixes with the milk or whey—does not settle to the bottom like meal; they eat it readily, and they thrive on this mixture as on new milk. I practice feeding calves in this way till fall feed is good, and have no more trouble to winter them than I do my cows. I keep them in the same stable with my cows; give them the same chance, with the addition of one quart of oat-meal each per day, or its equivalent, and when grass comes they thrive at once, without waiting half the season to recruit. Hiram Walker. *Mexico, N. Y.*

[For the Country Gentleman and Cultivator.]

CARE OF HORSES.

I have found one table spoonful of air-slacked lime, each alternate day, often cure a horse with a heavy cough from a cold. Many horses, if blanketed in the stable, will take a cold every time they get a dash of rain in the winter, when if not blanketed in the stable, they will be entirely free. The blanket should be used when standing out, and if the horse is extra heated coming in, till the blood has time to get to its usual heat. This I have practiced for about twenty years, and have lost no horses.

JERSEY.

☞ The Ashtabula Co. (Ohio) Ag. Society has appointed its next exhibition at Jefferson, Sept. 24—26. President, Calvin Dodge; Secretary, W. H. Burgess.

[For the Country Gentleman and Cultivator.]

How to Improve a Badly Run Farm.

MESSRS. EDITORS—Having in a former article advised those with limited means, to buy farms that were more or less run down, and stated that they would have to adopt some course of improvement, by which the land may be brought up and made productive, I will now proceed to point out the course that it will be best for them to pursue.

The first and most important point to be considered and attended too, is a general change of crops. Most farms that are run down, have been under a long course of cropping with one or more of the different small grains, such as wheat, rye, barley or oats—one of these grains generally being made a leading crop; in wheat sections, it is wheat, in other sections oats. And although rye and barley are raised to some extent, yet a large portion of badly run land has been mainly cropped with wheat or oats; while these crops are calculated to have as bad effect on land, and to give it a poor worn-out appearance as quick as perhaps any other crops; though in reality it may not be so very badly run down for other crops, besides wheat and oats. Again, such land is generally not plowed more than four or five inches deep; consequently, though the land may sooner appear to be worn out, yet in reality it is only badly run to that depth. Hence a change of crops, and deep and thorough cultivation, may be expected to produce excellent results.

This may be illustrated by relating a little of my own experience. (And here let me say, I do not intend to state or recommend anything in these remarks, that I do not consider warranted by my own experience or observation.) I commenced farming on a small place that had been let to neighboring farmers,—no one residing on the place for many years, before it came into my hands. As is often the case, all that was raised was taken off from, and nothing returned to the land. It had not been seeded down for a long time until the spring before I bought it, it was seeded to clover. Wheat had been the principal crop, alternating occasionally with oats—the last crop, which was oats, only yielding some twelve or thirteen bushels per acre. It was so badly run out, that it was difficult to get any one to take it. The spring it came into my possession, I planted six acres to corn and potatoes, the corn yielding at the rate of fifty bushels of shelled corn to the acre, and the potatoes at the rate of 160 bushels per acre. These crops were raised without any manure, except the clover sod of the previous spring's seeding, and were undoubtedly due to a change of crops, deep plowing, and good cultivation. Nor was this all; by making a general change of crops and management, the land was not only made productive and profitable, but the general appearance and credit of the place was brought up and improved so much, that when I wished to sell and buy a larger farm, it sold for about double what it cost me. I have also pursued a similar course or change of crops on my present farm,—which was considerably run down—with very satisfactory results.

There are many similar instances of the great benefit of a change of crops, that have come under my notice, but I can make room for only one or two. One is in regard to a piece of rather poor hemlock land, that, as it was not considered very good wheat land, had been kept in spring crops some years, and as the owner said, "wanted seeding down." He said he "did not expect much wheat, as it was not wheat land, and had been a going in spring crops some time and wanted rest; but that in order to get it in a good condition for meadow, and well seeded, he was going to summer fallow and sow it to wheat." Yet that field gave 30 bushels per acre, which was an extra crop for that kind of land. In another instance, the same kind of land that had been badly run to spring crops, was sown to wheat on oat stubble, and gave over 20 bushels per acre.

Having shown that a change of crops produces good results, we would continue to make use of this fact, as far as circumstances will admit, by adopting a systematic change or rotation of crops. There are many good and sufficient reasons besides those already given, in favor of a rotation; but the readers of the Co. GENT. being familiar with them, I shall proceed to consider what crops should be included in a rotation for a badly run out farm.

Perhaps the best way to determine this question, will be to consider what crops have been grown to impoverish the land. But this has already been done to some extent, in considering the necessity of a change of crops. Hence, having seen that the small grains have been the principal crops raised in running down the land, it will be best to raise as little as possible of them, and find some other crops to take their place.

Now there is one crop that I have seldom, if ever, heard charged with wearing out, or even injuring land. True, we sometimes hear of land becoming "clover sick" in England. But I believe such cases are exceedingly rare, if there are any at all, in this country, and more especially when plaster is sown on the clover, as it always should be on all but very rich lands. But on the contrary, while clover never impoverishes land, it is seldom raised without improving the soil and putting it in a much better state for other crops; and this improvement being much greater and more surprising on badly run land that has been but seldom, if ever, clovered. Again, clover can be made a very profitable crop, as I hope to show when writing more in detail in regard to its cultivation. Now for these reasons, and many more, some of which may be given another time, clover should be the leading crop in bringing up land.

Next to clover I consider corn the best crop to grow in improving the soil. The reason for this opinion can be easily made apparent to all, in this way. Who ever heard of land being run down where clover and corn were the principal crops; and these crops, made good by thorough and deep cultivation and manuring, were mostly consumed on the farm, as, of course, they should be? Such cases must be exceedingly rare, if indeed there are any. For my part, I have yet to meet with the first one. True, run down land will not continue to produce as good crops for any considerable length of time after a change as it does at first. Yet by raising clover and corn for the principal crops, and feeding a large portion of both on the farm, the land may be constantly improving, and the crops after the first and principal effect of a change is worn off, be continually growing better. It is true that corn grown year after year on the same field for a long time will on most soils run down the land. But when it is grown only once in four or five years, in a judicious rotation, and everything in relation to the crop well managed, the general effect and result will be altogether different.

But, though corn and clover should be the principal crops, yet there should be some kind of grain sown after corn to seed down with. What this should be may perhaps be best determined in each particular section, regard being had not only to what would be likely to succeed best, but also to the kind of grain that clover will take the best with, it being always important to get a good seeding.

In considering the best way to improve a badly run farm, I have not alluded to underdraining, for the reason that a man commencing on such a farm, more or less in debt, will have but little means or inclination to do anything of the kind, but will rather choose to buy a farm that may be improved without it. Still there may be instances where it will best to buy land that needs underdraining. In such cases due allowance should be made for it in purchasing, and sufficient money retained to pay at least some portion of the expense.

As good and deep cultivation and manuring, which should include a liberal use of plaster and ashes, have been frequently alluded to, it will not be necessary in concluding, to do more than merely state that while they are very important on all farms, no one need ever think to succeed for any length of time on badly worn land without giving both the strictest attention. And that, as a general change

in the course of cropping and manner of cultivation will give good crops on the start; so these crops should be so managed and used as to give the largest amount of manure that it may be practical to make, thus making good crops add largely to the amount of manure, which in turn will add to the amount of crops, and this course followed up, will be sure, sooner or later, to make a good productive farm. F. *Orleans Co., N. Y.*

Stealing Fruit, and Hedges for Protection.

I have a vineyard which last year suffered greatly from the depredations of idle boys and men—so much that I lost nearly half of the fruit, and as the Empire State cannot boast of a law to protect the fruit and vine-grower, I have taken the liberty to request you to inform me through the Co. GENT., if there is not some hedge plant (in connection with a board fence,) whose thorns would make it impassable. Is the Osage Orange hardy enough? If not, how is the Buckthorn or Honey Locust? Would either of them do? Your experience will no doubt at once suggest the best and most reliable. H. V. F. *Stuyvesant, N. Y.*

The Osage Orange forms the most terrific barrier against fruit thieves—being densely armed along all the branches or shoots with stiff and very short thorns; and when these constitute a thick hedge, attempting to pass is a most undesirable task. The winters at Stuyvesant may be too severe; yet possibly by cutting a good underdrain along or near the line of the hedge, the plants may be enabled to endure the winters, or if cut back partially by frost it may prove a serious detriment. Next to the Osage, the Honey Locust is probably best. It is very hardy, and some of the plants are quite thorny. It needs cutting back well, to form a dense hedge. The Buckthorn is both hardy and dense in growth, but is nearly destitute of thorns. Whatever may be used for the hedge, it will prove a perfect failure, unless properly cut back, and a strip of land four or five feet wide on each side, is kept clean and well cultivated for some years.

Budding Fruit Trees.

Will you or some of your correspondents tell me the proper time for budding the peach, cherry, apple, and pear—also the "modus operandi," and much oblige a

YOUNG FARMER.

As a general rule, bud when the bark peels freely, and towards the latter part of this peeling season, as the newly formed buds are then more mature and better ripened than before, and the cambium or cement between the bark and wood is thicker and causes the bud to adhere better. A little later still, when the bark is not easily raised from the wood, the operation cannot be well performed, and will be likely to fail. This period will vary much according to the influences which affect growth, as season, cultivation, soil, &c., but usually the cherry must be budded first, then the apple and pear, and lastly the peach. As soon as the cherry *begins* to form the terminate bud of its shoots, budding should be performed; this is often about or soon after midsummer. In some places, pear stocks cease growing quite as early; while in others growth continues a month later—in the latter case, the work may of course be done much later. Budding the peach is usually done in the last week of summer and the first two weeks of autumn.

The great leading requisite for success is a *freely growing stock.* On such a stock the bark will peel freely; while on an unthrifty or stunted one, it will not peel at all, and the work cannot be done. A sharp knife is essential for cutting off the bud, and slitting the bark of the stock; and the ligature must press evenly and with sufficient force to bring the cut face of the inserted bud into close contact with the wood of the stock. On a stiff thick bark, or with a stiff bud, this pressure must be stronger than with a softer bark, which might be injured if too severe. For the details of the operation, see the first number of the Illustrated Annual Register or the first volume of Rural Affairs, p. 60, where every part is minutely described and made plain by engravings.

Usefulness of Toads in Gardens.

At a recent meeting of the Brooklyn Hort. Society, the subject of toads in gardens was under discussion, when Mr. Burgess, an "old country gardener of long experience," stated "that thirty years observation had convinced him that it was the snail and not the toad which devoured strawberries and their vines. Most people attributed the destruction to toads, but he was certain that they were harmless. In gardens he considered them of great use, and all gardeners should look upon them as their best friends. Mr. Fuller endorsed all that had been said upon the subject, and he was glad to hear it. He believed the toad a most valuable auxiliary to the gardener. They were worth $500 a piece, as they keep the ground clear of insects entirely. Besides they can be domesticated! This was not generally known; nevertheless it was true. Those in his garden knew him, and would follow in order to get the insects, caterpillars, etc. Their preservation ought to be attended to. Mr. Burgess was of the opinion that there should be a fine for killing them."

ROOT PRUNING FRUIT TREES.

At the last evening meeting of the Brooklyn Horticultural Society, the subject of root pruning was discussed. Mr. Burgess said that unless properly attended to, fruit trees, when early, bear three times too much, thus exhausting themselves. They should be root pruned the first three years, and fed with rotten manure. Mr. Brophy, another practical gardener, stated that he had done root pruning for 22 years; all fruit trees require such attention, because the roots spread. Cutting gives them a healthy condition. The length of a pear tree root is wonderful; he had known those of comparatively young trees to extend twenty feet. Mr. Burgess—I have seen them thirty-five feet long. Mr. Brophy considered it necessary for any fruit tree, pear, apple, quince, cherry, etc., to be spaded round about two feet in the spring; this will improve it. He cited as proof that the best orchards are where the ground is plowed every year. It is the stirring and cutting the roots which gives them their thrifty condition. Mr. Fuller remarked that a root never feeds from the same place two years; as its main stem grows and extends, it throws out fibres or rootlets at different places. These side roots successively die off each year. The root of a grapevine feeds at the end, and if six feet long, the space between it and the vine is lost. The root should be cut down to two feet. Also with all stoned fruit trees, if six feet high, the root should be pruned down to two feet. Old quince trees should be pruned, for the rootlets die off, and the main stem needs food. When this pruning is done, the roots should be fed with rich soil, &c. Mr. Fuller illustrated what he meant by some strawberry roots; from a root of six inches he trimmed off half, and would even prefer only one inch of root to the whole of it. He also explained in an interesting and intelligent manner, that strawberries were biennial and not perennial, as generally suppposed, and showed from the roots present that the original died off when two years old. A member desired to know which was the best—to prune in spring and feed with rich soil, or in the fall and not feed the roots. Mr. Fuller replied that the operation in the spring would ensure a full crop the next season, while if done in the fall, only half a crop would be obtained.

[For the Country Gentleman and Cultivator.]

CULTURE OF INDIAN CORN.

In answer to the call of O. W. True of Maine, in the Co. Gent. of April 17th, for more specific directions for raising corn, I will detail my own practice more at length for his and others' benefit. As soon as convenient after the buckwheat has been removed, we haul and spread all the manure that may have been made after wheat sowing, and thus we go on hauling and spreading the manure pretty much as it is made through the winter as the weather may permit, finishing generally some time in April, so as to plant, if circumstances favor it, about the 1st of May. The *time* of applying the manure does not appear to affect the yield of corn, but the product is plainly in proportion to the *quantity* and *quality* of manure. By shallow plowing, I mean the shallower the better, provided the ground is turned upside down, but it is difficult to make good work under four or five inches deep. I was cured of deep plowing for corn long ago; and as for subsoiling, I have seen too much of it by others to try it myself. When we plant in hills, the poultry droppings are hoed up fine, and a man preceding the droppers divides a handfull among four or five hills, and draws a little dirt on it with his foot to prevent the grain coming in immediate contact with the manure, which would be dangerous. When we have drilled the corn, the fine manure was sowed on the surface afterward, but I would prefer having it covered with the seed, hence the inquiry in regard to the Gage.

Chester Co., Pa. A. W. W.

[For the Cultivator and Country Gentleman]

What I Have Learned about Raising Corn in Thirty Years.

1. It is best to plow the land well before planting, because that will save work in planting and hoeing, although it does not usually increase the crop—indeed I have seen good corn grow on the same land for several years in succession without the land being plowed at all.

2. It is best (if planted in hills) to make the rows run both ways, and then the cultivator or plow will go both ways, and it will be but little work to hoe it. It is also best to put a little quick manure in the hill, to give it an early start, but if guano is used in the hill put it 5 or 6 inches one side of the seed; if it is put under the seed, it will kill it.

3. It is best to try or sprout some of the seed before planting, to be sure it will grow. Do not get the hills too thick, 3½ feet each way, four stalks in a hill, is right on my land—if I plant thicker, the ears will be small. It is better to plant some sort of corn which inclines to grow a cob longer than will fill out on the tip end, as there will then be room on the cob for as much corn to grow as the strength of the land will admit of.

4. When hoeing, the top of the ground should be kept mellow and level, and free from weeds. When ready to hoe the last time, which should be the first part of July, scatter a very little turnip seed all over the ground, and if the land is in good order, there will probably be a fair crop of turnips for cattle, provided the corn is cut up by the roots as soon as it is ripe enough; but if the corn stand too late, turnips will be scarce.

5. It is hard to keep the same sort of seed a long time, because if I save for seed the ears which are first ripe, in a few years it gives a small, early sort. If I save the largest ears for seed, it only takes a few years to get a very late sort. If I save such ears as grow two on a stalk I soon have a sort which will grow 3 or 4, or 5, ears on a stalk, but all small.

6. Corn will shrink by drying in the crib more than we are apt to suppose—probably 25 bushels out of 100. When I succeed in raising 100 bushels of well dried corn on one acre in one year, I intend to save the corn till all my neighbors can see it. C. B. *Near Springfield, Mass.*

[For the Country Gentleman and Cultivator.]

Seasoned Fence Posts---Cheap and Good Fence.

Editors Co. Gent.—Some thirty-three years since I had about five hundred panels of post and rail fence made. The posts were locust, the rails white oak Some ten years since the principal part of the posts were so decayed that it became necessary to build the fence over; there was a remnant of about forty panels that appeared to stand firm, and of course was not repaired when the balance was made over. Although ten years have now passed since the balance was made over, yet the fence stands firm, and possibly will last from two to four or six years longer.

This fence now standing, was made from well seasoned locust. Nothing could be more conclusive to my mind, that it was the condition of the timber from which the posts were made, which has caused it to last ten years longer than that which was made from green timber. For the last ten years I have built more or less fence out of strips of boards, or perhaps they might be denominated laths. I cut my timber fourteen feet long, and have it sawed three inches wide and one inch thick. The timber I use is white oak. Other kinds of hard wood might answer, but not as well. Five of these laths are a sufficient shield against any stock which has weight of character sufficient to be suffered to run at large. Three posts form a panel; each lath receives three fence nails, one at each post—nine-penny nails are the best. I have never known the nails to be drawn or broken by shrinkage, which is often the case with wide boards. A fence of this description can never be injured by the action of the wind, and unlike post and rail fence, it will not sag down hill or on sideling ground.

In the construction of a fence of this kind, the consumption of timber is but trifling, which is in many sections of our country, a matter of first importance. If the posts are locust and seasoned, it would be safe to say that a fence of this description would last thirty years. After a little practice, two men can put up twelve panels per day. Efficiency and economy considered, I like the above described fence better than any I have ever had on my farm. N. P. A.

Elm Grove, Ohio Co., Va.

[For the Country Gentleman and Cultivator.

Protection of Fruit Trees from Curculios, &c.

Messrs. Luther Tucker & Son—I had occasion to visit a friend a few days ago. I took a walk through his orchard, and observed some plum and cherry trees with something tied around them, which on closer inspection, proved to be cotton batting. On inquiring what it was for, Mr. W. informed me that it was a plan of his for preventing insects (which eat up everything in the shape of a plum, nectarine, &c., in this part of the country,) from climbing the trees and destroying the fruit.

He has some very fine plums, which have blossomed and formed fruit well for 3 years, but it was all destroyed by insects, until he used the cotton wool, since which he has never failed in having a large crop of plums, &c.

The "modus operandi" is as follows:—Procure some cotton batting, cut it in strips 3 inches wide, wrap it around the trunk of the tree about 2½ feet from the ground; then tie a string about an inch from the bottom so that the top will hang over somewhat like an umbrella. This effectually prevents the insects and ants (which are very troublesome in this neighborhood not only eating the fruit but also the tender shoots,) from passing up the trunk, as it is impossible for them to go through or to cross it.

I send you this, hoping it may be of service to some of the plum growers among whom your journal is circulated.

Jefferson County, Ky. G. D. N.

[For the Country Gentleman and Cultivator.]

TRANSFERRING BEES.

ANSWER TO J. E., *Belmont Co., O.* He wishes to get the bees and combs from a large to a small hive. The proposition of opening the holes in the top, and setting an empty hive over, will not be likely to succeed. The trouble and annoyance that attend the bees in the attempt, will be very likely to interfere with their labors. If the hive they are in is a good one, aside from its size, and the comb new, I would cut it off at the bottom, leaving the proper dimensions. If the hive and combs are old, let them be till they swarm, when *that* may be put into a suitable hive. Three weeks from the time the first swarm issues, drive out the balance of the bees into a new hive also. If the hive they are in is too large for them to swarm, drive out a swarm at the *proper* season, set it on one side the old stand, 18 inches. The new one the same distance the other side. If either gets more than half the bees, put it farther off In 3 weeks drive out the old hive, as in the other case. Should it be desired to make the present hive smaller, the bees should be pacified with tobacco smoke first; then with a square make a mark where it is to be cut off. At this season, (April,) when most of the combs are empty, the hive may be laid on its side—even without anything over the bottom to confine the bees, and the boards of the hive sawed off as if it were an empty box. The hive may then be turned bottom up, and the combs cut off even with the bottom with a knife, one at a time, the bees brushed back as you proceed. When done, the hive may be returned to the stand, and the bees hardly know that anything has been done. The whole thing is done quietly, simply by the use of smoke. It is not necessary to smoke them *continually*, nor a great deal at any time, but an occasional puff will keep them peaceable. At the beginning a few strong puffs may be required.

St. Johnsville, N. Y. M. QUINBY.

[Translated from the French Bee Journal for the Co. Gent.]

An Editor's Experience in Keeping Italian Bees.

WHAT IT COST HIM TO INTRODUCE ITALIAN BEES INTO HIS APIARY.

Up to this time, March, 1861, (having had the Italian bee one season only,) we are not able to decide the question whether they are more active than our own bee. We find them to be very eager in their searches after honey, great gourmands even, and we frequently see them endeavoring to enter the neighboring hives. If honey be placed at a certain distance from their hive they discover it sooner than the native bee. As to its strength we would judge that in its combats with our native bee it is overcome three times out of four. The day that we received our bees they were in a most attractive good humor, the fatigue of the journey had overcome them, and we believed in good faith that they were endowed with a most exemplary sweetness of disposition. We here affirm to those who do not love bees because they fear their sting, that *these* never sting. We moreover can add, as the German gardener wrote last year to the "Society of Acclimation" at Paris, "that the Italian bee shows itself attached to its master to such a degree that there is no necessity for using a bee hat or masque in approaching its hive." But we shall take good care how we propagate the story as did the aforesaid gardener, that the Italian bee goes to work two hours before our native bee—that is to say, a long time before daylight in the morning. We are of opinion that if the French public were to encounter Italian bees foraging for honey by the aid of lanterns, they would occasion numerous inconveniences to their owners. This, of course, is often the case in Germany.

Many persons have sought to obtain these bees of us, and when we have told them the price, they have exclaimed in astonishment. But it cost us 440 francs to import 9 colonies, or about 50 francs each, (about $10 U. S. currency.) This is not dear, for we know of others who have had great difficulty in saving one colony out of three. We may here mention M. Abbe Vochelet, de l'Eure, who procured a couple of colonies last year, and they cost him 70 francs each ($14.) Whoever desires a novelty, has got to pay for it. We will do what we can to multiply these bees, so as to be able to furnish them at a reasonable price the coming autumn, otherwise our friends will have to import them and take their chance as we did.

One of our New-York correspondents, Mr. EHRICK PARMLY, writes us that the Italian bee arrived in the United States last spring, and has been multiplied with success, and queens of pure blood have been sent into almost every part of the Union. More than one hundred of them reached California during the past autumn. It appears that California is the American paradise of bees. They swarm there from five to seven times a year, and the climate is such that they do not pass a single week without gathering honey. We are not surprised that the Italian bee has been propagated so much more quickly in the United States than with us, although we are so much nearer to their native country. It is because the Americans possess two things of which we have but little, they have their pockets full of dollars, and a good dose of German enthusiasm.

The same correspondent speaks of the recent commencement of a monthly bee journal published at New-York under favorable auspices. Welcome to our new brother, and may he have numerous readers. We regret exceedingly our want of knowledge of the English language, as we would not willingly lose a word of the novelties it will contain.

Bucks Co., Pa. C. W. TAYLOR.

[For the Country Gentleman and Cultivator.]

HOW TO KEEP SAP-BUCKETS.

MESSRS. EDITORS—In the Co. GENT. of April 3d, an inquiry is raised as to the best manner of keeping sap-buckets through the summer. In reply will give my experience. My buckets are made of cedar; they are light and durable. Two hoops at the bottom and one at top. When the "sapping season" is over I collect by buckets to the "boiling place," and *scald them thoroughly* in water. This will prevent their being worm-eaten during the summer. I then stack them 3 and 4 deep *bottom up*, and put them away in a good *dry* place in an out-house. In this way have kept them from year to year, never having lost a single one from any cause. If your correspondent will pursue this course with his buckets, I will warrant them all right the next spring. Take them out the next spring, tap the hoops a little, scald them out, and you can then tap *the trees* and your buckets will hold the sap.

Having told your correspondent C. F. S. how to keep his sap-buckets, I want him to tell me how to prevent hens from eating their eggs? If there is any remedy short of *cutting their heads off*, should like to know. J. F. BABCOCK.

P. S. Very little maple sugar made in this vicinity, on account of depth of snow. Winter wheat is looking well.

Unadilla Forks, N. Y., April 20. J. F. B.

[For the Country Gentleman andCultivator.]

KEEPING DUCKS---INQUIRIES.

MESSRS. EDITORS--I wish this season to raise a dozen ducks for profit, but there is no brook or spring on the premises, and I dont want to have them wander off to some distance from the house in search of water. How can I fix a place for them in the yard? I suppose setting a tub in the ground would be a good plan, but we haven't any tubs to spare. A flour barrel of course would leak. It would be too much expense and trouble to dig out a little pit, and line it with cement. If I had a tub, trough or some such thing, I should have to fill it from the well once in a while.

Will you or some of your correspondents please tell me what is the best and easiest way to fix it, as the ducks cannot be kept at home without some access to water? Is raising ducks to sell profitable?

I wish some one would answer "A. A. U.'s" inquiry in current volume, page 173, of your paper, about a disease of fowls in which they lose their neck feathers. I have a rooster that has lost a good many feathers from his neck, and strange looking red skin shows. The rest of his skin seems very dry and scurfy. He is dull and very lean. His plumage is very shabby and homely, while before, that is last fall, he was a very handsome spangled rooster. He has been just so 4 or 5 months. His appetite is good enough, and he is only a year old. What is the trouble with him? He isn't lousy.

In cleaning out the hen-house the other day, I got a number of hen lice on me. Oh, what bothersome things they are! You have to take everything off immediately and search thoroughly for the little rascals, or you will learn how a lousy hen feels. I might tell you how I made keeping a few hens and selling their eggs profitable, even when I had to buy all the grain to feed them with, but perhaps you don't care anything about it. [Let us have it.] G. M. *Conn.*

Time Table—say for one week in July, 1862.

Date.	Field A.			Field B.			Gen. Expen.			Family.			Prod'ce account No. 1.			Cattle.			Total.	Total.	Total.	Temp.	Rain.	Wind.	Remarks.
	Labor.	Horse-team.	Ox-team.	Labor.	Horse-team.	Ox-team.	Labor.	Horse-team.	Ox-team.	Labor.	Horse-team.	Ox-team.	Labor.	Horse-team.	Ox-team.	Labor.	Horse-team.	Ox-team.	Labor.	Horse-team.	Ox-team.	Degrees.	Inches.	Direction.	
1, ...	4½			3						½	½								5	½	—	75	—	W.	Cut wheat—boy to mill.
2, ...	2			3															5	—	—	80	—	"	Cut wheat, part in A, p't in B
3, ...																									
4, ...																									
5, ...																									
6, ...																									
Total,																									
Value,																									
Ledger page,																									

[For the Country Gentleman and Cultivator.]

COCHRAN'S FARM ACCOUNT BOOK.

Eds. Co. Gent.—I notice in the last Co. Gent. a long article on farm accounts, and as it is a subject in which every farmer is interested, and as the first of April is approaching, the best time of the year to commence, I wish to introduce to your readers a sett of books gotten up expressly for the purpose, by the late Prof. Cochran of Detroit, Mich. It is nine years next month since I jumped, as it were, out of a city on to a farm. From that date to this, I have kept an account of most everything connected with it; and of all the books I have seen or could make, there has none seemed so well suited for a farmer as the sett mentioned above. No doubt some of your readers have seen it, and appreciate it. Five minutes every evening, one evening at the end of every month, and one day at the end of the year, will give you an account of everything—a balance sheet at the end of every month, and at the end of the year a general statement of what you have lost or gained, whether on field A. or B., dairy or cattle, hogs or sheep; and then you will know how to lay the ropes for another year.

This sett of books consists of a day-book and ledger, and an explanatory book accompanying them. In the last part of the day-book is a time table, made as follows:

[See table above.]

The time table is about as perfect one as can be arranged, as under head of remarks you can write down what your labor is at each day, as the table will show the time and place. It will do just as well for a farmer of a thousand acres, as for one of a hundred; no matter whether he keeps one hand or twenty, except in the latter case it would be necessary for him to sew a few leaves into the Ledger. The Ledger has paper ruled especially for poultry and for farm produce.

The explanatory book will teach any one in a few hour's time, so that they will have no trouble whatever. In this way also many of our farmer boys would learn how to keep books, which in after life would prove useful to them.

I have been often amused in looking over my books, as at first I thought of stock, horses were the most profitable to raise, whereas in the series of years I have lost money at it, and find that these insignificant sheep (as some designate them,) have never failed every year to pay a good interest above both feed and care, whether wool was thirty or sixty cents a pound. So of wheat, between the midge, rust and frost, it only held its own, while potatoes are as sure as *sheep*. Buying and feeding hogs is something like wool speculating; you never know anywhere near where you are to land. BUCKINGHAM.

Duncan's Falls, O., March 3, 1862.

We can endorse all our correspondent says in favor of Prof. Cochran's Farm Account Books. They were noticed in this paper when first issued, some years ago, and we kept them for sale as long as we could procure them. If to be had at all, now, it must be by applying to Prof. C.'s widow, Mrs. E. Cochran, Detroit, Mich. The price of the three books was $2.

[For the Country Gentleman and Cultivator.]

COAL TAR FOR FENCE POSTS.

Messrs. Editors—In Co. Gent., vol. 19th, page 221, is an article by B. W. Rogers, in relation to the preservation of fence posts, &c., in which he recommends the use of coal tar and rosin in equal parts. I believe that the rosin is superfluous. Inclosed you will find a chip which was taken from a fence post set five years ago, smeared with coal tar alone; it was taken out about three or four inches below the surface, where a post usually commences to decay. The adjoining post, split from the same log, (and I should think the two lay side and side,) set at the same time, but not coal-tarred, has decayed so that you can kick into it more than an inch. This in my estimation, proves the efficiency of coal tar. In applying the tar, I think that the timber should be well seasoned; heat the tar, letting it boil a few minutes, then apply hot. An old paint brush is the best thing that I have ever used for putting it on. Cover the whole surface of the post that is to remain in the ground, and from eight to ten inches of that above. After it has dried, which is usually in one or two weeks, tar again as before, and as soon as dry the posts are ready to set. If Mr. Rogers will try the experiment, I think he will find that coal tar alone will be as efficient as though rosin were mixed with it.

Huron County, O. YOUNG FARMER.

[For the Country Gentleman and Cultivator.]

DOMESTIC TEA.

Before I close I will give you the name of a leaf that makes as good tea as the average you get from China, for you may know that a good deal of that brought from China is not gathered from the Tea plant, but from wild herbs.

Pick the common blackberry, while young and green, and the red raspberry leaves—dry, and mix half and half. This makes a very good tea in taste and flavor. Try it.

S. W. JEWETT.

[For the Country Gentleman and Cultivator.]

POUDRETTE FACTORY.

Eds. Co. Gent.—I am very glad your correspondent J. M. C. has again called the attention of farmers to the manufacture of home-made poudrette, (as per Co. Gent. March 27.) I am not at all particular whether a brick vault or a wooden box is used in saving the fecal matters of the privy. The main object is to get the farmers to attend to this matter, and in the most economical way. For with J. M. C. "I think that this source of procuring a valuable manure is not sufficiently appreciated by our farmers, and this has been one source of waste on the farm that should be guarded against." Therefore I hope to be excused if I offer a "few more last words" upon this subject, which by the way some may think a very stale one. "But evil to him that evil thinketh."

In my communication in your issue of the 6th March, I quoted somewhat from Prof. S. W. Johnson's report, 1857, to the Connecticut State Agricultural Society. In this I quote from his Report of 1859. This I do, for I know of no one else who *handles* this matter quite as well as he does. He says: "James Smith of Deanston, the illustrious originator of 'thorough drainage,' is said to have asserted that the waste of one man for a year suffices to manure half an acre of land, and in Flanders we are told that the manure from such a source is valued at $9.00 per annum.

"We shall err on the safe side if we assume the agricultural value of the exuviæ of each inhabitant to be $5 per year. It is easy then to understand that on an ordinary sized farm which supports a family of five to ten persons an annual loss of material may occur to the amount of from $25 to $50.

"I fully believe that the night soil produced by a family of ten adults may be made to yield here, as it certainly does in Flanders, a clear profit of $100.

"This is certainly no unimportant item in agricultural practice, and our best farmers are bestowing upon it the regard it deserves."

The farmer who clears out his privy vault, but once a year, the contents of which are treated as nine-tenths of our farmers manage this matter, will be sadly disappointed if he expects to raise from it the value of five dollars from each adult member of his family. For, as says the Professor, "When urine and fæces are mixed together at a summer temperature, they almost immediately begin to decompose; the ammonia-yielding substances they contain, at once yield ammonia, which passes off into the air, and their sulphates are dissipated as sulphuretted hydrogen. This process goes on with great rapidity, and only requires a few days to complete itself. Thus the waste of nearly all the ammonia, the most *costly ingredient*, is inevitable, if the night soil be left to itself a few days in warm weather. It thus happens that the contents of necessaries left to themselves, as is the case *ninety-nine times* out of a hundred, are liable to, nay must, undergo great loss of fertilizing matters. As a result of these deteriorating processes the night soil as found in necessaries is greatly inferior in quantity, and vastly so in quality, to the original urine and fæces. This is evident from the analysis of the poudrettes which are manufactured from it.

"During the present year I have had opportunity to examine a specimen of night soil taken from a large quantity collected in the village of New Caanan, and fairly representing the average quality of this substance as found at the beginning of winter in ordinary privies. I am indebted to Edwin Hoyt, Esq., of New Canaan, for this sample."

The Professor gives the analysis, "as taken from the heap," in contrast with the original unadulterated article. But it is unnecessary here to give the figures. The result of the analysis, however, showing there was but half the original amount of ammonia in the fæces, and but one-seventh as much as in that of urine. Beside much loss of other valuable constituents of the mass.

"The night soil collected then in villages and cities may (as in this case) undergo a loss of 80 to 90 per cent. in quantity, and a large additional deterioration in quality."

This fact thus demonstrated by analytical figures that cannot be *called in question*, explains why many practical men place so little value on this fertilizer, because when left to itself, and only removed from the vaults once a year, it amounts to little more than a noisome slop, chiefly made up in fact, as well as in appearance, of paper, cobs and sticks.

I have thus freely quoted from Prof. Johnson, for he has put the matter in a language that "a child might understand," and a question here presents itself, "how can the farmer make the most of these deposits?"

The Professor recommends a similar plan to that I described in my letter in the Co. Gent. of the 6th March, viz.: Provide a sufficient quantity of well dried pulverized muck, (a good loam will answer,) which in the summer season should be daily applied in quantity sufficient to absorb the liquid portion. The whole mass in warm weather should be daily mixed by the use of a hoe, which (from the quantity of muck used) should "come out clean." "As the mass accumulates it may be removed—a cleanly, decent job." The contents may be piled up under cover, or what I think a better way, it should be spread in some outbuilding, dried, sifted, and put up in barrels or boxes for use when wanted, or the dried material may be used several times over, so says the Rev. H. Moule, pages 110 and 111 Patent Office Report 1860.

One more extract and I close. The Professor says—"This programme makes indeed a good deal of work, muck is to be hauled, and somebody must *fork over* the stuff every day; *but it will pay;* there is no doubt of that. The work will not be offensive, the compost will be rich, the privy itself will be a place not to be abhorred!"

L. Bartlett.

[For the Country Gentleman and Cultivator.]

A Good and Cheap Farm Gate.

Editors Co. Gentleman—I have noticed that you have described almost every kind of farm gate except the kind I make; and as mine is the cheapest and simplest I ever heard of, I will describe it. I take a stout chestnut rail with one straight flat side, and cut it off to the right length to reach from the ground to the top of the post it is to hang to; put a band on the lower end, and an iron pin in it, say seven-eighths or one inch in diameter; then lay it down and lay on the boards, enough to make it four feet high, (beginning say four inches from bottom,) and scribe on each side of the boards, saw in and chip out with a chisel until you let them down flush; then nail them, and nail on an inch strip to hold all fast; put an inch board on each side at the latch, and bolt them, and then brace on with three ⅝ inch carriage bolts, taking about eight, costing two cents each, and the gate is done. A good man can make half a dozen a day. To hang them, put a rock at the bottom of the post, and drill a hole two inches deep in it for the foot, and either put in pin and band, or round the top of the rail, and spike on the top of your post a plank projecting over with a hole in it.

The three links and hook I consider the best fastening.

I think it a good plan to plant a tree near the post, that it may grow into a gate post by the time the present one decays.

I have 16 gates of this kind on my place, and think them a great saving of money where time is worth seven shillings a day. I intend to keep making until I am rid of the old bars.

John Hinchman.

P. S.—Some of my gates have an iron eye at the top for the top pin to play in, and some have neither brace nor tie rod, and yet they do not sag. If big post sags, a wedge of stone or wood between foot rock and post brings all up right.

J. H.

Cheese for the English Market.

A cheese-dealer in New-York, who ships large quantities to England, writes to a dairyman of Herkimer county as follows:—

"The cheese for the English market should be colored, but *not* too deeply—not darker than straw color, and not over salted, which was the great error committed some years ago—the great desideratum being that the *quality* of the cheese should be rich; and the cheese should be well pressed, avoiding that porous character, which we are glad to say is now much less frequent than it used to be a few years ago, but which is still occasionally complained of by English consumers."

[For the Country Gentleman and Cultivator.]

The Average Yield of Milk and Butter per Cow.

Messrs. Editors—I presume that there are many of your readers who, as well as myself, might adopt the language of J. W. Proctor, of Essex, Mass., and say in regard to *several* articles on the above subject, which appeared in your volumes of last year, what he has said in regard to *one* of them. "I have been *much interested*," says Mr. Proctor, "in Mr. Wattles' statement of his Dairy Products for several years past." I also was *much interested* in that communication, as also in several others which treat of the same subject, and of others closely connected with it; and thinking that the statements made in the course of last year would go far towards determining pretty satisfactorily what might be considered a fair milk and also a fair butter yield per cow—or at least, an average yield of these two dairy products—I concluded to collate all the statements bearing upon these points with the view of obtaining conclusions which might be considered final, or at least sufficiently satisfactory on these points, which had not yet been settled beyond all question in my own mind, nor, so far as I could judge from inquiries and conversations, in the minds of any of my neighbors. As there may be several who would like very much to have these points *settled* and fixed in their minds, or in some form of record for future reference and guidance, and as the statements made in the Country Gentleman for 1861, seem sufficiently numerous and sufficiently trustworthy for the purpose of obtaining such fixed and final conclusions, I have been induced to present to your readers the results of my investigations in as brief and as serviceable a form as possibie.

In deducing inferences from the facts about to be passed under review, it should be remembered that the produce of a cow, whether in milk or butter, must depend very much upon the breed, the size, the food and several other circumstances which must be taken into account, and for which allowance must be made, in forming an opinion as to what might be reasonably expected from any particular cow, or as to whether any particular cow is a good, average or poor milker.

Before proceeding to collect into one view and collate the several statements to be found in Vols. 17 and 18 of the Country Gentleman, being the vols. for 1861, it may serve a good purpose, for some one at least, to state what Mr. Flint in his "*Milch Cows and Dairy Farming*,"—the highest authority on the subject—says in regard to the average and maximum yields of Ayrshire cows. As a specimen of maximum or *very large* yields, Mr. F. says, "The Ayrshire cow has been known to produce over ten imperial gallons of good milk a day." As to *average* yields it is said, "Youatt estimates the daily yield of an Ayrshire cow, for the first two or three months after calving, at five gallons a day, on an average; for the next three months, at three gallons; and for the next four months, at one gallon and a half. This would be 850 gallons as the annual average of a cow; but allowing for some unproductive cows, he estimates the average of a dairy at 600 gallons per annum for each cow." Reckoning that 3½ gallons of the Ayrshire cow's milk will yield 1½ lbs. of butter, the annual produce in butter is estimated at 257 lbs., or of cheese at 514 lbs., at the rate of 24 lbs. to 28 gallons of milk. Aiton sets the yield much higher, saying that "thousands of the best Ayrshire cows, when in prime condition and well fed, produce 1000 gallons of milk per annum." One of the four cows originally imported into this country by John P. Cushing, Esq., of Massachusetts, gave in one year 3864 quarts, beer measure, or about 966 gallons, at 10 lbs. to the gallon, being an average of over 10½ beer quarts a day for the whole year. This and some other yields of Ayrshires in this country being not so large as those stated by Aiton, Mr. Flint suggests that our climate is less favorable to the production of milk than the moister one of Great Britain.

At page 31, vol. 17 of Co. Gent., we find an account of a cow belonging to a farmer in Maine, which with only ordinary feed, gave a produce from April to January of 250 lbs. of butter and 45 lbs. new milk cheese, besides raising a calf; and appended to the account the editorial remark that a whole dairy of such cows would be very profitable, though in herds of ten or more cows there are generally enough poor milkers to eat up a good share of the profits of the best; and that consequently, to make dairying profitable, we must discriminate more closely, and keep only *paying* cows.

At page 97, same vol., we find that Mr. Shattuck's dairy, consisting of 30 cows, or 22 full grown cows and 8 heifers, yielded in butter at the rate of 191 lbs. per cow, or calling the 8 heifers equal to 5 cows, at the rate of 212 lbs. per cow.

At page 98, same vol., we find several interesting items in regard to the large dairy of Z. Pratt, Esq., consisting of 50 cows. The yield of these 50 cows averaged in *milk*, for the usual season of about 8 months, 636 gallons in 1857, 651 gallons in 1858, 601 gallons in 1859, and 525 gallons in 1860, or 260, 270, 245 and 214 gallons respectively per cow for the years named. The average yield in *butter*, was for the years named, respectively 130, 161, 166 and 182 lbs. per cow for the season. The probable reason for the gradual *increase* in *butter* from year to year, while the *milk* was, with one exception, gradually *decreasing* from year to year, is not mentioned, but this remarkable fact was probably owing to a gradual increase in the *richness* of the pastures and other feeding stuff. Mr. Pratt's cows are of what is called the native breed.

At page 143, same vol., we find the "Product of a Small Dairy" of 6 cows, from which, after reserving about one quart of milk daily for table use, J. L. R. made in 1860, 1,387 lbs. of butter, which is a fraction over 231 lbs. per cow. In this statement 3 heifers and 1 farrow cow are called equal to 3 cows.

At page 162, same vol., we have an account of the *butter* yield of the dairy of Mr. Albert Yale, and whoever will turn to his statement and observe the several manifestations therein given of a superior and unusually judicious management, especially as to plastering his meadows and pastures, frequent salting of his cows, cutting hay earlier than usual, and a few other points, will not be surprised when he learns that, after such superior management, Mr. Yale gets a yield of 255 lbs. of butter per cow—that being the average of 10 cows for one year.

AGRICOLA.

[For the Country Gentleman and Cultivator.]

To Keep Bugs off Squash or Cucumber Plants.

Knock the bottoms out of cheese boxes, nail on screen cloth, and set them over the hills. When not in use pack them away, and one set will last a number of years.

SUBSCRIBER.

Barn-Yard Manure for Wire Worms.—A Wayne Co. correspondent of the *Rural New-Yorker*, says that "common barn-yard manure in the hill will prevent the wire worm from destroying young corn." We have observed that corn, hill-manured suffered less from worms than that without, but supposed it mostly due to the more rapid growth of the corn. It will pay well in any event to try the experiment—pay in earlier corn and a surer and heavier crop.

The following Table gives the Capacity of the several Sizes of Rams, and the Dimensions of the Pipes to be used in connection with them.

Size of Ram.	Quantity of Water furnished per minute, by the spring or brook to which the ram is adapted.	Length of Pipes.		Calibre of Pipes.		Weight of Pipes, (If of Lead.)		
		Drive. Feet.	Discharge.	Drive.	Discharge.	Drive pipe for any head or fall not exceeding 10 feet.	Dis. pipe for not over 50 ft. rise.	Dis. pipe for over 50 & not exceeding 100 ft. in h't.
No. 2,	3 quarts to 2 gallons,	25 to 50,	Where desired,	¾ inch,	⅜ inch,	6 lbs. per yard.	8 lbs. per rod.	14 lbs. per rod.
3,	1½ do. to 4 do.	25 to 50,	do. do.	1 do.	½ do.	8 lbs. do.	11 lbs. do.	16 lbs. do.
4,	3 do. to 7 do.	25 to 50,	do. do.	1¼ do.	⅝ do.	10 lbs. do.	11 lbs. do.	16 lbs. do.
5,	7 do. to 14 do.	25 to 50,	do. do.	2 do.	¾ do.	23 lbs. do.	20 lbs. do.	28 lbs. do.
6,	12 do. to 25 do.	25 to 50,	do. do.	2½ do.	1 do.	40 lbs. do.	6 lbs. do.	8 lbs. per yard.
10,	25 do. to 75 do.	25 to 50,	do. do.	4 do.	2 do.	22 lbs. pr ft. (of cast iron.)	20 lbs. do.	23 lbs. do.

[For the Country Gentleman and Cultivator.]

THE HYDRAULIC RAM.

A correspondent of the GENTLEMAN of April 17th, remarks that "much has been said in favor of the ram and little or nothing as yet in opposition to its use; adding that "he knows instances where it has failed and been thrown aside." No doubt of it.

He desires to know how he can prevent its stopping, a source of great annoyance. In answer to his inquiries, I send you Douglas's statement concerning the quantity of water furnished by spring or brook, size of drive and discharge pipes, &c. It is of general interest to all who do or may use a ram for raising water. It is as follows:

[See Table at the head of this page.]

I judge from the statement of your correspondent, that there may be a lack of water to work a ram of that size. His strainer on the supply or drive pipe, may be too coarse or too fine, or omitted entirely; there may be a leakage in the discharge pipe; or the stroke of the valve may be too long. Any one of these difficulties or a combination of two or more of them, would account for the stoppage.

Greater head or fall than named in the table, will demand heavier pipes used both for driving and discharging. Mr. Douglas says, "where the fall is great a small ram should be used. A brook or spring furnishing 7 gallons a minute, with a fall of 8 or 10 feet, No. 4 should be used. If only three or four feet fall, then use No. 5.

Douglas states that "the ram may be used where but 18 inches of fall can be had, yet more is better." To enable any person to make his own calculation as to what fall is sufficient to supply a ram to raise a given amount of water where wanted, it may be safely calculated that about one-seventh part of the water can be raised and discharged, say 10 times as high as the fall applied, and so on in the same proportion as the fall or rise varies." Mr. D. adds, "if a ram be placed under a head of 5 feet, of 7 gallons drawn from the spring or brook, one gallon may be raised 25 feet, or half a gallon 50 feet. Or with 10 feet fall, of 14 gallons drawn from the spring, one may can be raised 100 feet, and so on in like proportion."

Prof. Loomis says, "the power expended in working a ram is the product of the quantity of water used, multiplied by the height through which it falls before it acts on the machine. The useful effect produced is the product of the quantity of water raised, multiplied by the height to which it is elevated. In experiments carefully made for the purpose, the expense was found to be to the useful effect as 50 to 32; that is to say, *the machine employed usefully nearly two-thirds of its force.* The valve may be made to close from 40 to 100 times a minute, according to the range of motion allowed it, and the pressure of the water."

An English writer on the hydraulic ram says—"it is an exceedingly useful machine for elevating water to a considerable height. It is simple in construction and has no parts liable to get out of order, and will work continuously for years without repairs, after being once put in operation, all that is required being a small stream of water with a few feet of fall, it being dependent for its operation on the momentum of the falling stream, which is confined in a supply pipe."

Thus the reason is quite apparent why your correspondent, Messrs. Editors, "has seen nothing in opposition to the general adoption of the ram." A deficiency in fall or in supply of water, a leak in the discharge pipe, or of too long a stroke in the movement of the valve, which in Douglas's rams is so made as to be adjusted to a longer or shorter stroke—any one, I say, of these defects, may be productive of evil. So it is if a man builds his mill where the fall is insufficient, or the supply of water is too small, his case would be a failure, but this would be no argument against the use of water-power for driving machinery. So of the ram. When the requisite conditions are all complied with, the ram will work with as much certainty as does the machinery in a mill driven by water-power, where there is a good fall and water plenty.

GEORGE.

[For the Country Gentleman and Cultivator.]

The Culture and Removal of the White Pine.

Of all American Evergreens, none are more beautiful or of more early and rapid growth to maturity than the pine; hence the value of the pine becomes enhanced to those who would attain an early maturity in shrubbery for the adornment of a rural home and its surroundings. It is best to remove the pine from the mountains where they usually grow, at as early an age as practicable—say when the plant is 6 or 8 inches in height, at which time you will place them in your garden in rows three feet apart, and a space of two feet between each plant in the row. Be careful that each plant has a ball of earth attached to its roots as large as a quart cup. You will now, during the growing season, be careful to work them as you would your garden vegetables.

Your trees may now remain from two to four years in your nursery, as may best suit your convenience. The most desirable size for transplanting is when the tree has attained the height of three or four feet, at which time it will have become perfectly acclimated to your soil. The best time I find for removal to be from the 20th of March to the 15th of April, the winds having to a great degree abated. In removing your pines from the nursery, be careful to prepare a hole from three to four feet in diameter, and loosening the bottom six or eight inches below the roots of the tree. Never set the tree deeper than it grew in the nursery. Be careful in removing, to dig sufficiently far from the body to avoid injuring or bruising the small fibrous roots, as these are necessary to the life and growth of the tree. Take up all the earth you can, which will adhere to the roots in removing from its bed, placing, if necessary, a broad plank or sheet under the roots in lifting the tree, to prevent the dislocating of the earth from the roots. Set in carefully, and tramp with the feet until all is firm and compact. If the season is very dry, water occasionally, and if the tree is large, three stakes may be driven diagonally, to which fasten the body, to prevent the winds from loosening the earth at the roots. Be careful not to place them in clumps in your landscape grounds, nearer each other than 14 or 16 feet, or you would avoid a second removal.

I have adopted the above plan in the cultivation of the pine, having grown many hundreds of them, and scarcely lost a tree. ISAAC P. SHELBY. *Fayette Co., Ky.*

[For the Country Gentleman and Cultivator.]

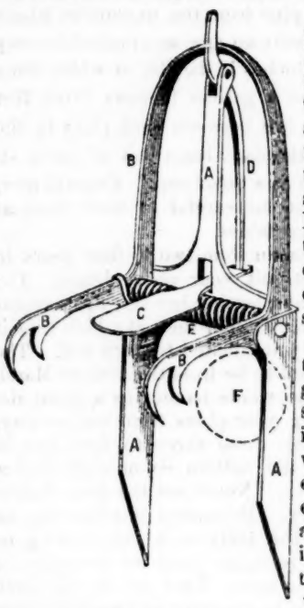
AN EFFECTIVE MOLE TRAP.

Messrs. Eds.—The season is approaching when the gardener will resume his labors. I often think of his trials, because I have frequently been frustrated in my own efforts in this occupation. My present purpose is to write of an intruder, which is in many gardens extremely troublesome and vexatious, and tell you how I rid my garden of him. I refer to the garden mole.

Several years ago I commenced a garden in a piece of warm sandy loam, which had been for many years in meadow. As soon as the ground was planted the moles commenced their subsoiling and surface plowing. My peas, beans, corn and melons were extensively raised quite too early in the season, and received so great a degree of aeration that they died outright. I was sorely tried, and resolved to exterminate the moles speedily. But I found it easier to resolve than to do. By much watching I caught two or three, but their successors came promptly forward. I then tried to hire boys to watch them, and offered them four shillings apiece for all they would catch. I got no moles in this way.

I then commenced making traps. After several trials I succeeded in my efforts. Judge of my satisfaction as I took the "little plagues" out of the trap, morning, noon and evening.

I supposed a dozen or two were all my grounds contained. I was greatly mistaken. I kept the trap set continually; and when autumn came I had caught seventy-two. The next season I caught a greater number still, and nearly exterminated them from my garden and an adjoining meadow of two acres. Last season I caught five only. I did not see a furrow raised by them until the middle of August, and not a mole hill in the meadow.



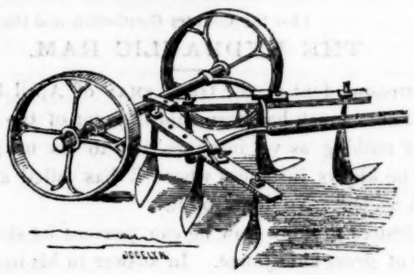
Mole Trap.

A. A. A. the body of the trap, 10 inches long—B. B. B. the hooks connected together by a bow—C. the pan, which rises as the mole plows along under it, and releases the trigger D., when the hooks strike down on to the mole. E. a coil spring. —F., in the dotted line, is the centre of the mole's passage, two or three inches below the surface of the ground.

I send you a drawing of the trap for the benefit of gardeners. Some people suppose the mole is useful in gardens by destroying wire worms. Pigs are equally so. I have dissected a great many of them, and never found anything in their stomachs except the common earth or angle worm. They do not eat vegetables, but they manage to destroy them by ill-directed plowing. I have had strawberry beds, and beds of young seedlings, ruined by them. They can easily be caught by the trap if the gardener will pay attention to their habits, and learn to set the trap right. After my success with my trap, a tool maker in our village commenced making a few for the neighbors, and by degrees they have been scattered over several towns. They cost about six shillings. [See advertisement in another column.]

To set the trap—first stamp down all the mole paths in the garden, in order to learn where they come in, which is nearly always from an adjoining piece of turf ground. After having chosen your place to set the trap, scrape away the surface down to the mole's path. Then stick the legs of the trap down close by the side of the path, until the coil spring comes down to the hole, and lies lengthwise of the same, directly over it. Then raise the hooks and set the trap. It is necessary to pack a little dirt under the pan, and some more on each side of the same, to exclude the light from the passage, or the mole will dig deeper as he passes under the hooks, and not get caught. He springs the trap by raising the pan. The mole cannot be baited. A trap must be so made as to shut down on him when he raises the earth.

Gaylordsville, Conn. C.



Hand Cultivator for Garden Use.

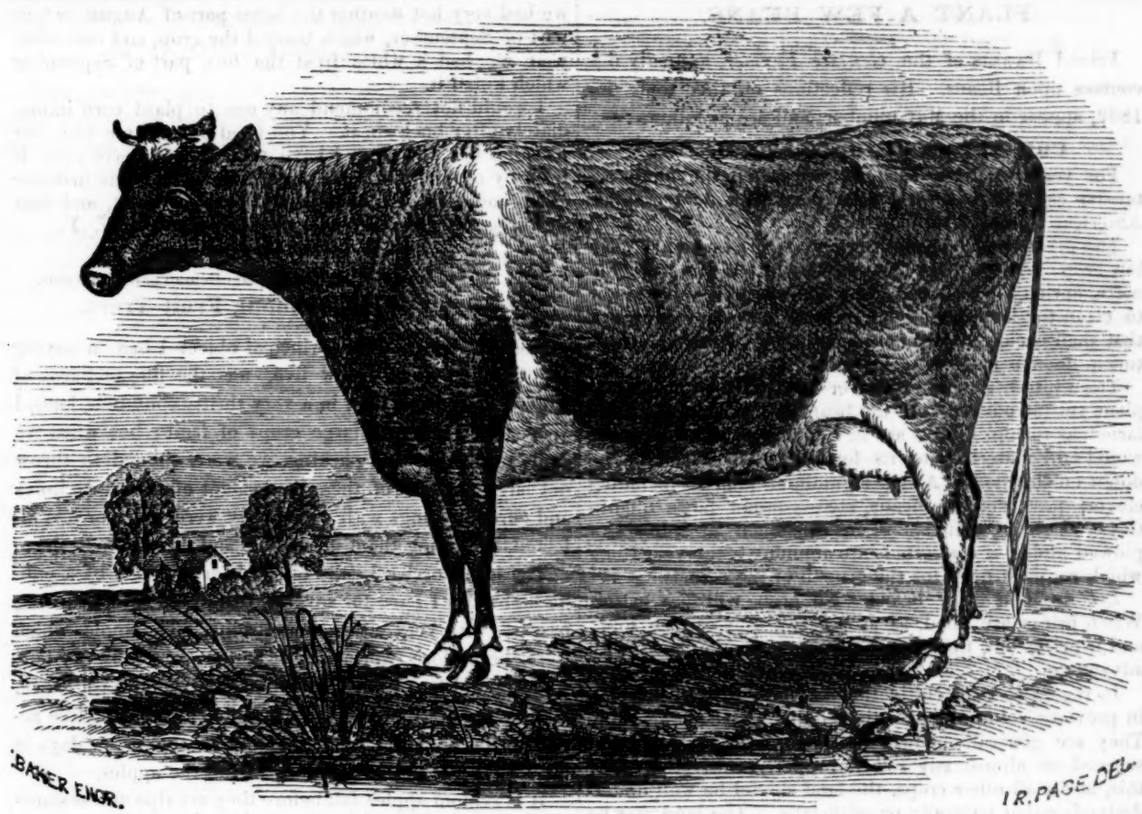
The accompanying illustration represents an implement made by Haines & Pell, New-York, for the cultivation of roots or any garden vegetables, between the rows. It is pushed forward by a long handle, the lower part of which only is shown in the engraving, the wheels and knives straddling the rows, so that the whole space between them is cut over and loosened up, the first set of knives being adjusted as closely as practicable to the row, and the others spreading apart as widely as the distance between the rows will admit. It seems to be a convenient and promising tool.

THE JARRING PROCESS ONCE MORE

Messrs. Editors—Last year all my peaches were stung by the curculio. In order to prevent their being destroyed this year, I wish to cover the fruit with some suitable material that will effectually prevent their falling victims to the rapacity of the "little Turk." Perhaps you or some of your correspondents will inform me what material is the best and cheapest for this purpose.

West Chester, Pa. C. D. F.

We know of no external application that will prevent the attacks of the curculio, that does not cost more to apply *effectually*, than to kill them by the jarring process, which we have so often described. The lime application is repeatedly recommended, and has succeeded by continual repetition, when there are but few insects. A neighbor used it thoroughly and extensively on many trees, and among the rest on several nectarine trees. Every rain would wash it off, and even heavy dews would leave bare spots on the young fruit; the motion of wind among the leaves would wear off the lime coating; and as soon as a single bare spot could be found the insect was sure to thrust in its egg-depositor. With all the labor thus expended, the owner had half a dozen nectarines. Yet, on further inquiry, it was found that these grew on a tree under which a young calf was kept tied during the curculio season, and which frightened them away. On a small scale, the best way is to *jar* (not shake) the insects daily without a single intermission down on white sheets and kill them. On a larger scale, the orchard must be converted into a yard for pigs and poultry, which must be sufficiently numerous to destroy at once all the stung fruit that falls. When the insects are numerous, both remedies (jarring, and animals,) must be combined. To make the jar sharp and effectual, cut off a limb, leaving a stump an inch long, on which strike with an axe or sledge. All this is familiar to many of our readers, but is repeated in answer to numerous inquiries from others.



ALDERNEY COW "JURA."

Imported by and the property of R. L. Maitland, Esq., of Newport, R. I.

[For the Country Gentleman and Cultivator.]

SHEEP EATING EACH OTHER'S WOOL.

Messrs. Editors—Being desirous to know the cause of my sheep eating one another's wool, I take this course thinking perhaps some of your correspondents might suggest something that would explain the cause, and also a preventive.

The circumstances are as follows: I had in the fall upwards of two hundred merino ewes, which I intended to breed from. I divided them equally, selecting all of the greasiest wool ewes, which constituted one flock—the remainder made up another flock. The former were confined to their yard, with a small range of two acres, from which they got their drink. The latter had a yard similar to the former, and access to a meadow of 40 acres. Both were fed hay from the same mow, the quality of which for the first three weeks, at the commencement of winter, was coarse, which grew on wettish land, and was salted about 3 quarts to the load. The balance of the time they were fed good timothy hay. Both flocks are in good condition.

The former flock I noticed about the first of February, that from some of them there was a spot of wool torn out from their hips as large as your hand, which increases, and also on the inside of their hind legs, and up under their belly—some on their sides, and some on their forward legs. I watched them closely, and found that some were as greedy for it as they would be for fresh grass in the spring of the year. I immediately went to sorting such out. As fast as I would discover one eating from another, I put them by themselves; but I soon gave that up, for they would strip one another naked.

The latter flock is free from the perplexing and unprofitable habit of the former. I am also wintering four other flocks, and nothing of the kind is to be seen.

I have fed sulphur and salt frequently, and at present keep it before them. I have filled their wool with snuff, but found that useless. And have also fed them pine boughs.

Now, Messrs. Editors, can you, or any of the readers of the Co. Gent., give any information relative to the cause of the above difficulty, or a preventive? Either will be thankfully received. C. H. R.

[For the Country Gentleman and Cultivator.]

LICE ON CALVES.

A writer in the Co. Gentleman of April 10th, recommends a free use of sulphur for some time, to destroy this pest of young stock. The process seems too slow to accomplish the end desired; as you must use sulphur til the blood has absorbed enough to kill the lice. I should fear that this practice would injure the creature before it would kill the tormenters.

I once knew a physician, when caterpillars were making sad havoc with the fruit trees, and when the profession were denouncing the use of calomel, as it was a poison; who set his student to try the experiment of inoculating some trees with calomel, thinking that the sap would carry it into the foliage and thus destroy the caterpillars; but it signally failed, and they in time destroyed the trees. The best and surest remedy I ever knew or tried, is to take a strong decoction of tobacco in a pleasant day, and saturate the animal afflicted to the skin all over with it, and your vermin are gone at once. It is a perfect dead shot, and is not injurious to the animal which gets the basting. It is equally destructive to ticks on sheep.

Mexico, N. Y. HIRAM WALKER.

Vermont Sheep.—We see it stated that Edwin Hammond of Middlebury, recently bought seven ewes of E. S. Stowell of Cornwall, for which he paid $725. Also, that Geo. Campbell of Westminster, purchased of Mr. Hammond six sheep for $1,400, and five of W. R. Sanford of Orwell, for $500.

PLANT A FEW BEANS.

Friend HARRIS of the *Genesee Farmer*, annually discourses upon Beans. His reflections on this topic for 1862, appear in the May number, and are as follows:—

Cultivation of the White Bean.

For years we have earnestly advocated the more extensive cultivation of the white bean as a field crop on American Farms.

The great need of American agriculture is a good "fallow crop"—some plant that will stand our hot, dry summers, enrich the soil, and allow the use of the horse hoe to clean the land during its growth. A plant, in short, that shall occupy the same place in our rotation as the turnip does in English agriculture.

The white bean comes nearer to this than any other plant yet introduced. If the beans are consumed on the farm—as turnips always are in England—their cultivation would add materially to its fertility. There can be no doubt on this point. All the leguminous plants—including clover, peas, vetches, beans, etc.—contain large quantities of nitrogen, and this when consumed by animals or plowed under, is converted into ammonia—the very thing which we most need for the growth of the cereals.

Let us then grow beans. No crop will pay better. When prices are good, as at present, they can be sold; and if prices fall, they can be fed out on the farm with advantage.

In regard to their cultivation we have written so much in previous volumes that little need be added at this time. They are generally grown on warm, light soil, but will succeed on almost any soil if properly cultivated. For this, as for all other crops, the land should be well underdrained, either naturally or artificially. The land may be plowed in the fall and again in the spring, and made clean and mellow before planting; or a clover sod may be turned over, and the beans planted at once. The common "white medium" is generally considered the most productive variety, but the White Mountain or Marrow yields nearly or quite as well, and brings a better price. It is a little larger, rounder, plumper and handsomer, and is gaining in popular esteem.

They may be planted in hills 2½ feet apart, and 15 to 18 inches apart in the rows, dropping five to six beans in each hill; or they may be drilled in with a machine, in rows 2½ feet apart, and a single bean 2 inches apart in the rows. The latter, perhaps, gives the larger crop, but the former requires less labor in hoeing, etc. In this section they are usually planted the first week in June.

[For the Country Gentleman and Cultivator.]

BUCKWHEAT A GOOD CROP.

MESSRS. EDITORS—I noticed in the Co. GENT. of some time ago, a communication from J. W. COLBURN, on buckwheat being a bad crop for the soil. I consider buckwheat to be a good crop—if not for the soil, it is for the granary. I do not think it a very exhausting crop—not so much so as many others. It seems to draw its subsistence from the atmosphere more than any other crop I raise, and I think so well of the crop that I raised 550 bushels in the year 1860, and nearly as much in 1861. I make use of it for feeding both man and beast, principally to milch cows. I feed it about three parts of buckwheat meal, and one part corn meal.

I will give you a little of my experience in raising buckwheat. I have a field of ten acres—a part of it has been sown to buckwheat every year for the last thirty years, and the other part nearly as long, *without any manure.* The first fifteen years it usually grew too large, and some part of it would lodge on the ground. Late years it does not grow quite so stout. I now think of letting it rest for a time, or put in some other crop. It has yielded from 25 to 30 bushels per acre on an average each year, with the exception of two years. One year, I think in 1844, we had very hot weather the latter part of August or fore part of September, which blasted the crop, and one other year we had a white frost the fore part of September which killed it.

I would not recommend any one to plant corn immediately after buckwheat. You need not ask me why, for I cannot tell you; but I have tried it, and have seen it tried by others, and have never known but one instance of a good crop of corn raised after buckwheat, and that was *very highly manured.* B. *Clinton Co., N. Y.*

[For the Country Gentleman and Cultivator.

Benefit of Hogs among Fruit Trees.

EDS. CO. GENT.—The principal object I had in buying the farm on which I now live, was the fine orchards of fruit. They were then in a very thrifty condition, loaded year after year, with large crops of fruit; but when we came to picking and packing, we were obliged to throw out large portions of them on account of the worm holes and curculio stings with which they were more or less affected, rendering them unsaleable and fit only for cider.

The lower orchard, (the orchards are divided by a public highway,) I have for several years past used as a hog pasture, with very satisfactory results. The apples which were heretofore wormy and knotty, are now as fair, smooth, and free from blemish, as one would wish to see. I allow my hogs and pigs, (the more the better,) free access to the orchards the year round, except a few days in October, while gathering and packing the apples.

It is seldom apples fall before they are ripe unless something ails them, and that *something* is usually an apple worm or a curculio, and as the pigs are not very particular about their diet, all goes down with a relish, thereby destroying millions of troublesome insects which could not otherwise be got rid of.

The hogs keep the orchard thoroughly plowed and manured without any assistance from me; keep down the grass and weeds, rendering the orchard much thriftier than could be done by broadcast cultivation, as the hogs do not disturb the roots, but a plow would, besides the inconvenience of working among trees, where you are liable to do more injury than good.

My upper orchard I am obliged to mow, and one would be astonished at the comparative quantity and quality of the fruit in the two orchards. The difference in quantity is as six to one, and the quality 100 per cent.

The pear and cherry trees enclosed in the orchard in which the hogs run, are loaded nearly every year with crops of fruit which would make an amateur's mouth water—while on trees of the same varieties just across the road, can only be found knotty, wormy, unpalatable specimens. Now I can no more afford to be without hogs in my orchard, than I can afford to be without fruit; for without one I should be almost certain to be deprived of the other; and by adopting this course I seldom fail of having a good crop, and *never* fail of finding a ready sale at remunerative prices, even when there is a large crop.

If any of the readers of your excellent journal are skeptical on this point, let them try it for a term of years, and I believe their skepticism will vanish with the increase in their crops.

Now, neighbors, don't try the experiment with any of your *long-tailed Shanghia racer breeds, with a snout like a ten foot pole*, for you'll surely be disappointed with the result. Such hogs you can never satisfy; they will tear the bark from and undermine your trees, besides soon acquire the knack of standing on their hind legs and help themselves to the best fruit. This I know from experience. But instead of the above mentioned breed, try the Yorkshire, Suffolk or Essex, and you will be doubly paid. J. P. "*Brace Farm,*" *Oswego, N. Y.*

☞ Double Chinese Primroses, capable of being propagated by seed, have been introduced into England.

[For the Country Gentleman and Cultivator.]

A GOOD FARM FENCE.

Take good straight rails from 15 to 20 feet long, and posts from 6 to 6½ feet long, and 5 to 7 inches in diameter. Chestnut is good. After you have heaped up a heap of brush to burn, put the ends of the posts you are going to set in the ground, on the heap, and then set the bushes on fire, and char the ends of the posts, which will prevent them from rotting so soon, taking care not to burn them too much. Then dig the holes from 2 to 2½ feet deep, and set the posts and wedge them firmly in with stones and dirt. The rails of a panel should be of equal length. Then have one man take hold of each end of a rail, and spike it to the post; 4 rails high is enough.

Three men could build a fence very fast—one to dig the holes, the other two to build the fence. A fence built in this way is very strong—the rails not liable to be thrown by unruly cattle, takes up very little room, and needs no braces—plow close up to each side if you wish, and a very good fence to look at.

Instead of having bars at the entrance of your fields, make a gate in this way: Take two pieces of joists four inches square, and as high as you wish for the end posts. Then take five strips of inch board for the slats, the lower one being the widest, the next a little narrower, and so on, the top one being the narrowest. Then mortice holes in the end posts, and insert the slats and pin them. Take two strips for braces, one on each side. Fasten one end of the brace near the heel of the end post on which the gate is going to swing, and the other end near the top of the opposite post, and nail them to the slats. D. Davis.

[For the Country Gentleman and Cultivator.]

MILK FOR HORSES.

Messrs. Editors—I wish to be informed by some of your numerous correspondents who feel from experience or from observation, able to give reliable information as to the value of cow's milk—skimmed or sour milk—for horse feed. So far as I have heard anything said on the subject, opinions vary much. One gentleman thinks he has spoiled two or three good horses by feeding them milk pretty freely. They seemed to thrive upon it, and were fat and sleek, but in a few months had the *heaves*. I have heard others say that nothing was better for a horse than a few quarts of sour milk daily; one that it was a common practice to feed horses intended for the race or trotting course, with milk while preparing them. I have also heard it suggested that it was an excellent article to feed to young colts, to induce their vigorous and healthy growth, especially while being fed on hay, or hay and grain. In the midst of all this diversity of opinion, I am in doubt whether to throw away my sour milk, (for I will not keep a pig,) or feed it to my horse, which seems to be fond of it. If it is good for colts, I do not know why it should not be good, at least harmless, for a working horse. If some one is able to give light on this matter, I should like to see it. A Reader. *Stowe, Vt.*

[For the Country Gentleman and Cultivator.]

ANOTHER LARGE EGG.

I noticed in your paper of the 27th ultimo, an account of a "big egg." Now we don't pretend to be great poulterers and egg-growers, but I think we have had some eggs here as large as Mr. Contant's. I did not measure mine, but weighed them, and I now assert that in the month of May 1861, one of my hens laid four eggs which weighed 16 oz. in all. And one of my neighbor's hens laid several, varying in weight from 4 oz. to 4¼ oz. each. My hens are a cross between the Shanghai and common dung-hill fowl, being about ¾ bred Shanghai, weighing from 3 to 4 lbs. each.

Clifton, N. B. A SUBSCRIBER.

[For the Country Gentleman and Cultivator.]

SUCCESSFUL RAISING OF CHICKENS.

Editors Country Gentleman—Below I enclose you a statement, which if you think would be interesting to the readers of your paper, please insert. You can depend on its reliability:

Patrick Donlon, who lives with Lewis B. Brown of Westchester Co., and who has the entire charge of his poultry, set seven hens this spring. The result is one hundred and twenty-six chickens, all doing well. Last season he set eleven hens—the result one hundred and ninety-two. In the years 1859 and '60, the average was about the same, and in almost every instance, every egg hatched a chicken. He selects large hens, always puts with them 18, 19 or 20 eggs. The above result was not obtained by setting many hens, and then selecting some of the best, but this year seven is all he has set. Last year eleven was all he set. H.

[For the Country Gentleman and Cultivator.]

PROFITS OF POULTRY.

Poultry-Yard Account, from March 1st, 1861, to April 1st, 1862.

Poultry-Yard,—Dr.

1861, March 1.	To stock on hand:	
	68 pair fowls, at 75 cents,	$51.00
	3 ducks,	2.50
	4 guineas, at 31 cents,	1.24
	6 turkeys, at $1,	6.00
	To 42 dozen eggs set,	4.90
Dec. "	Poultry bought,	6.55
"	106 bushels feed,	45.71
	Total debits,	$117.90

Poultry-Yard,—Cr.

1861.	By 543½ dozen eggs found,	$76.72
	" Poultry sold and used,	117.96
	" " on hand April 15, 1862:	
	32 pair fowls, 75 cents,	24.00
	4 " turkeys, $2,	8.00
	2 " guineas, 62 cents,	1.24
	Total credits,	$227.92
	Deduct debits,	117.90
	Profits,	$110.02

The feed of these poultry is corn, as a general thing—occasionally we feed them oats or rye screenings. From the above it seems that the profit on each hen was nearly 75 cents.

Hunterdon Co., N. J. J. T.

[For the Country Gentleman and Cultivator.]

OILING HARNESS.

Messrs. Editors—Seeing J. L. R.'s communication in regard to oiling old harness, I will offer an improvement on his method of doing the job. It is as follows: Take Castile soap and make a *strong* suds with warm water, and wash the harness with it thoroughly; then let it dry, and then oil it with good clean oil, and it will look equal to new. The soap is equal to one oiling, and it leaves the harness perfectly clean, and is much better than to use clean warm water. I have used hen's oil with good success, and think it better than neat's foot oil for the purpose. Will J. L. R. please to try this method, and report the result? Massachusetts.

Recipe for Making Rhubarb Wine.

A correspondent of the Bucks County Intelligencer, gives the following recipe for making "American Champagne," or wine from the stalks of the rhubarb or pie plant;

Cut the rhubarb into small pieces, put it into just enough water to keep it from burning, boil until quite tender, strain through a coarse cloth. To one gallon of this liquid, add two gallons of water; to each gallon thus made, put four pounds of sugar; ferment in an open vessel forty-eight hours, then take off the scum, and add one pint of best brandy to every four gallons, after which put it into an air-tight cask; then let it remain six months undisturbed when it will be ready for bottling. In each bottle put one raisin, and seal the bottle well.

Wintering Sheep Successfully. — Thomas Gorby gives in the Ohio Farmer the following requisites for this purpose:—He says, "*Good shelter, regular feeding, variety of proper food, dry beds*, and *daily watering*, are indispensable to success with sheep."

On the Manufacture of Cheddar Cheese.

[In October last there was a magnificent exhibition of dairy produce at Kilmarnock, Scotland. The Highland Society contributed liberally for premiums. One of them was £20 for the best sweet milk cheese, which was carried by Mr. M'Adam, who has kindly furnished an outline of the method he follows in its manufacture.—Ed. Transactions of Highland Ag. Society.]

For various reasons I prefer making my cheese according to the Cheddar system. If the system is carried out with care and intelligence, one is almost certain of obtaining a lot more uniform and superior in quality than could possibly be made on the old Dunlop system. The latter is neither so easy nor so cleanly. In regard to quantity I have found, after weighing the milk with the utmost care for two successive days, and making one half on the Cheddar mode and the other half on the Dunlop, that the result is always in favor of the Cheddar.

The difference, however, in the price of the two kinds of cheese is important. In 1859 I sold my whole stock made in that season at £3 12s. 6d. per cwt., or rather over 14s. 6d. a stone of 24 lbs. In 1860 I sold all my cheese made between 23d March and 22d of November, at £3 15s., or upwards of 16s. a stone. Last year I sent the whole to an agent in London, and after deducting all charges, had a return of nearly 14s. 6d. a stone.

On the other hand, I have known of no Dunlop cheese sold during the last five years which has realized anything like what I have done. The difference has been at least 3s. per stone in favor of Cheddar.

I make my cheese once a day. The evening's milk, as soon as it is drawn from the cows, is put into shallow tin boynes to cool. Next morning this is put through a very fine wire sieve into the steeping tub, while the morning's milk is added as carried in from the byre. In May and the four succeeding months the milk put in this manner together in the evening and morning will generally have a temperature of about 80 degrees Fahrenheit. If it is not so high, a little of the evening's milk is warmed in boiling water to raise the whole to the above temperature. After this, the sour whey, annatto, and as much rennet as will coagulate the whole in an hour, are added and well mixed.

I generally put in about four to five quarts of very sour whey to about 140 gallons of milk. As soon as the curd is properly formed, I commence to break it with a hand breaker made of tin and wire, which is somewhat like a riddle, and having a wooden handle about three feet long affixed to the middle. When partially broken, the curd is allowed to subside a little. As much whey is then drawn off and heated as will bring the whole up to to a temperature of 80 degrees. After this, breaking is resumed, and the temperature maintained by adding more heated whey.

Nothing further is done for the next hour, but to draw off and heat as much whey as will raise the temperature to 100 degrees. At the end of the hour a portion of the whey is run off, and the curd is afterwards very gently broken with a shovel-breaker.

An assistant now gently pours as much heated whey as will once more raise the temperature to 100 degrees. During the time the whey is pouring, the whole is actively stirred, but afterwards more gently, till the curd has acquired proper firmness. I cannot say how long it may be necessary to stir. If too much acid is present, less time is required, and if too little acid, more is necessary. The time will vary, according to these circumstances, from twenty-five to forty minutes.

When stirring is finished, the curd is left half an hour, and then the whey is all drawn off. One side of the tub is raised a little to allow this to take place more perfectly. The curd is then heaped up to the highest side of the tub, covered with a cloth, and left for half an hour. After this interval, it is cut into large slices, turned upside down, covered up, and left for another half-hour. Then it is torn into thin strips and spread on a cooler, on which it is allowed to lie for another half-hour. After thus being turned upside down, it is left another half-hour longer.

The curd is then vatted and put into the press, on which 28 lbs. are suspended for about twenty minutes. Afterwards it is taken out, milled and salted. Cheshire salt is used at the rate of 2 lbs. to the cwt. It is salted in the cooler, and if it is above the desired temperature it is allowed to lie, perhaps for half an hour, and stirred up once or twice. Our dairy being very warm, I am unable to cool down the curd as low as I could wish before making it up.

On referring to my diary, I find that not one of the cheeses I exhibited at Kilmarnock was below 68 lbs. when vatted. The cheese is made up between two and three o'clock, p. m., and a dry cloth put on it the same evening. What I make on Monday is carried to the cheese-room on Thursday. Each cheese only gets one dry cloth daily. The room is over the dwelling house and dairy. Its temperature during summer ranges between 65 degrees to 80 degrees. The specimens of cheese I exhibited at Kilmarnock were not subjected to any artificial heat.

I use an oak steeping tub in preference to any other. All the implements and utensils are kept as sweet and clean as possible. The weight or pressure put upon the cheese is the same throughout the different stages of the manufacture.

[For the Country Gentleman and Cultivator.]

TRELLIS FOR GRAPES, &c.

In your issue of Feb. 20, page 126, J. Knox describes his trellis as being eight feet in height. This I think to be too high for grapes as far north as this, although it may of course be the proper height at Pittsburgh. In my opinion, 4 to 5 feet is the limit in height to which a vine should be trained. When this limit is exceeded, the size and quality of the grapes at the extremity of the vines, will be deteriorated. This is not the case however, with laterals; I have often noticed large well ripened clusters of grapes upon laterals at least 8 or 9 feet from the vine, while those upon the main stock, five feet from the ground, were smaller and of an inferior quality. Another and more potent reason for training vines low, is this: they are not so liable to be injured by the cold of our Northern climate as when trained eight or ten feet from the surface. Almost every one has noticed, after a severe winter, the dead stalks upon the vines of those trained upon high trellises, and even sometimes killing the whole top down within four or five feet of the ground. This of itself would seem to prove the value of low training; and frosts will often injure vines six or eight feet from the ground, while nearer the ground the vine remains uninjured.

Last fall I visited the vineyard of Mr. Hungerford of Ithaca. His vineyard is situated on the slope west of the village, and about half a mile from it. The slope descends to the east. The vineyard is composed of several gradually swelling knolls, some of which are partially terraced, the soil being a high sandy loam, needing, as he informed me, no underdraining. He has, in all, from three to five acres set to grapes, three of which are in bearing condition—all or most mostly all Isabella vines.* I never saw more thriving vines, nor better wood; and the grapes, I cannot describe them. They were certainly the most splendid Isabellas that I ever saw. The bunches were exceedingly large, some of them weighing over a pound—to the taste they were exceedingly delicious. He trains his vines to wire trellis, or two or three wires stretched upon posts set twelve or fifteen feet asunder. I noticed that almost every cluster was within two or three feet of the ground. I inquired the cause of this. He stated that one of the late frosts killed all of the blows, and they blossoming again but few came out. I do not hardly think this to be the cause of their being so near to the ground; but I think that not all, but a part of the blossoms were killed, and those at the top of the trellis. This is but another proof that low training is beneficial. Train low, but allow the laterals good length.

Cayuga Co., May, 1862. E. A. KING.

The Entomologist.

[For the Country Gentleman and Cultivator.]

No. 31.---Insect Tumors and Wounds in Raspberry Stalks.

A few years since E. S. Holmes, Esq., of Lockport, N. Y., sent me some stalks of the wild red raspberry (*Rubus strigosus*,) upon which were large knobby tumors, technically termed "galls," i. e., vegetable swellings or excrescences caused by the punctures of insects. And almost every year I have noticed an occasional instance of the same tumors on the raspberries in my own vicinity. From them I have uniformly obtained females only, of a particular kind of gall bee, no males, parasites or other insects being yielded by them.

In December last Edward Merritt, Esq., of Po'keepsie, forwarded to the Country Gentleman specimens of the Antwerp variety of the garden raspberry (*Rubus Idæus*) having excrescences upon them apparently of the same kind with those upon the wild raspberries. But whether they were really the same it was impossible for me to say, since instances are known in which galls which appear to be perfectly alike in their external form and internal structure produce different insects when growing upon plants or trees of different species, and even when growing on different parts of the same tree. I have therefore deferred replying to Mr. M.'s inquiry until I could breed the insects from the galls he sent. Kept in a warm room, and occasionally moistened, I expected the insects would have come out from one of these galls much sooner than they have done. It is evident that a warm temperature does not accelerate the growth of the gall bees (*Cyniphides*) as greatly as it does the gall flies (*Cecidomyides.*) It was not till the fore part of April that the insects began to make their exit from the gall, and down to this date thirty individuals have come forth, which are probably all that will be disclosed, as no new ones have appeared for a week past. The insect proves to be the same as that which infests the wild raspberry, and appears to be a species not yet noticed in scientific works. I therefore present such a description of these galls and the insect which produces them, as will serve to identify it hereafter.

In these galls a portion of the stalk of the raspberry is swollen into a large irregular excrescence, often two inches long and half an inch to an inch in thickness, resembling a potato, though smaller and less fully developed examples are common, these being more knotty and frequently appearing like a cluster of grapes that have grown together. Their color is the same as that of the stalks, being in the wild raspberry cinnamon brown after the leaves have fallen, and sometimes a kind of bloom of a sky blue color may be seen upon them, particularly in the creases and other depressed portions of the surface. Prickles like those of the stalks also grow in places upon them. Internally these galls are composed of a soft pith-like substance of a pale yellowish color, and in this, here and there, are curved and distorted streaks of a harder, white, woody substance. Numerous round cavities or cells occur in this soft pith, the sides of which are not hard as they usually are in the cells of other galls. And in each of these cells there lies during the winter season a small white maggot, soft and shining, bent into the form of a crescent, having no feet, and making no attempts to move.

About the beginning of May these maggots become changed into shining black four-winged flies, resembling small bees, which gnaw their way out of the galls, whereby the latter become perforated with holes the size of a large coarse pin, their diameter being about five-hundredths of an inch. I have sometimes noticed some of the holes in these galls to be much smaller, only half the usual size, whence I infer there is a smaller insect, probably a parasitic destroyer of this gall bee which comes from these galls, and which I have never yet obtained.

This insect pertains to the family Cyniphidæ and the order Hymenoptera. The female in having the antennæ but thirteen jointed and perceptibly though very slightly thicker at each end than in the middle, and in having the the basal segment of the abdomen not disproportionately longer than the others, will pertain to the genus *Figites*, and I had named this species in my cabinet the raspberry stalk gall bee, *Figites Rubus-caulis*. Its body is one-tenth of an inch long, black and polished, with the legs, antennæ and mouth dull pale yellow. Its wings are transparent though not clear and glossy, and they have a smoky spot bordering the second transverse vein on its hind side, this vein being twice as thick as either of the other veins.

These insects are slow in their movements. I have not seen them attempt to run, to skip, or to fly. They merely walk at a moderate pace, crawling up the stalk or other surface on which they are placed, with their antennæ extended out horizontally in front, and waving up and down, the tips each moment touching the surface, as if examining the path before them. And if menaced with danger, they instantly drop to the ground, and there lie still for a short time, as though they were dead.

In addition to these galls Mr. Merritt also sent some raspberry stalks showing wounds of a peculiar character. A row of small holes is perforated lengthwise of the stalk, causing it to crack open, exposing the central pith, in which a row of glossy eggs is seen, one having been inserted into each hole at the time it was bored. Mr. M. states that these wounds are very numerous, nearly a quarter of the raspberry stalks showing them, and that he has seen the same wounds in grapevines. I find the wild raspberries in my own neighborhood are also wounded in this manner, and I have heretofore seen the same wounds in the twigs of willow. Notice has recently been attracted to these wounds also occurring in the twigs of cherry trees in the vicinity of Newark, N. J. See Co. Gent. of April 24th, page 272. In the year 1858 the twigs of the apple trees at Akron, Ohio, were extensively injured in some orchards in this same manner, whence H. W. Howe, Esq., Counsellor at Law, of that place, was induced to watch this phenomenon closely, and at length he detected the culprit *flagrante delicto*—in the very act of piercing these holes. It was from the specimens which he thereupon transmitted to me that I know the insect which makes these wounds. It is the Buffalo tree hopper, *Ceresa bubalus* of Fabricius, which is figured and briefly described in my Third Report on Noxious Insects, Transactions State Ag. Society 1856, page 335. This insect has such a peculiar form that it has probably been noticed at some time by every person. It is of a pale grass green color, and is shaped like a beech nut, with short, sharp-pointed horns jutting out in front on each side, and when approached by the finger, with a sudden strong spring it darts away, and is lost to view. I have recently forwarded to the American Agriculturist an account of this insect, to which I must refer any one who desires more full information respecting it than can here be presented at this time.

It is scarcely necessary for me to add that when either of these insects now spoken of invade our gardens they may readily be subdued by cutting off and burning the affected portions of the raspberry stalks in the winter or early part of the spring. Asa Fitch. *Salem, N. Y.*

Stock for Canada.—The Helen Douglas of Annan, Capt. Maxwell, sailed from Annan Water-foot for Quebec, on Monday last, and had on board the following stock, which has been purchased in this country by Mr. Simon Beattie of Markham, C. W., a native of this place:—An entire thoroughbred horse, called Young Irish Bird-catcher, late The Heir, by Grey Plover, son of Irish Birdcatcher—dam by Caronna out of Repartee; 2 Short-Horn heifers, and 2 bull calves, purchased from a good stock near Lesmahagow; 40 Leicester and Lincolnshire sheep selected from one of the best flocks in Lincolnshire; 2 sows and 1 boar from Yorkshire; and poultry, dogs, &c. The horse was purchased by Mr. Beattie in Ireland.—*Annan (Scotland) Observer.*

[For the Country Gentleman and Cultivator.]

Agricultural Notes in Monroe Co.---No. VII.

The Shady Side.

I have endeavored, as far as practicable, in former communications, to portray such features in the systems of farm management in this county as appeared to be worthy of more general adoption not only *there*, but in other localities; and as I conclude my notes in this county, if I happen to give some of the slipshod farmers a thrust, they need not blame my pen—they should not obstruct the course with their bad management.

In almost every neighborhood I met with lots of farmers whose systems of farm management from year to year are *decidedly bad*—bad for their own revenue—bad for the stock of all kinds—exerting a bad influence on their own and the feelings of their families—*very* bad for the fertility of their farms, and bad for the country. Indeed, I visited many very fine farms on which the system of management with stock of all kinds, and the soil, instead of being such as to merely keep from deteriorating, was annually on the retrograde. Others there are who by neglecting to adopt a better system of husbandry, lose enough right out—directly and indirectly—to pay hired help for cultivating their farms in a most thorough and farmer-like manner, and at the same time keep their farms improving in fertility, and return them more clean cash, from year to year, than they now receive with all their hard labor and close calculations in their farm and family expenditures. It may appear to many to be a random and thoughtless remark, but it has appeared to my own mind that enough is annually wasted in this county, and lost, by neglecting to employ the means which are at hand to secure it, to pay for the thorough cultivation of all the tillable soil of the county.

Here is a young farmer who has but just commenced farming operations. He has a good farm, to appearance, of about 50 acres, and has just erected a good commodious barn on a substantial stone foundation, and a neat little cottage assures us that he has consulted his purse and economy in erecting his buildings, as far as would be practicable. There is some good taste manifested in the arrangement of the buildings, although his buildings are standing in a twenty acre field, because he cannot find time to erect any yard fences himself, nor get forehanded enough to hire them built. He labors at a very great inconvenience when hauling in his crops for want of a man or boy to load and mow his grain. He assures us that he cannot afford to hire help, because it will take too large a share of the profits of the farm.

His grain stands thin on the ground, and the yield per acre is small; but the soil appears to be very good, *naturally*, and he wonders why he is not able to raise as good crops as some of his neighbors, whose soil is not naturally as good as his. We know what the difficulty is—the soil has not been manured for a long succession of years. Let us propound a few questions to him as we move along towards his stercorary.

Do you make much manure? "Yes, I feed out most of my coarse grain on the farm, and none of my hay and straw is sold off the farm. I have a good lot of swine, now being fattened, which I calculate will consume my crop of peas and crop of Indian corn." All correct so far; but let us see how well it has been carried out in his system of farm management.

Here is a temporary shanty for a barn and stable, with the manure of two or three years all around it going to waste; and not a single load has been hauled out on the fields! Here are some 14 or 15 swine being fattened, and their pen and yard is on the verge of a stream of water, which sweeps away nearly all their manure to the river.

His Indian corn is not half as good as it would have been had he applied a good coat of manure to the soil. But he says he could not get time to haul out any manure, and so he planted his corn *without* manure. Tall pig weeds lift up their heads as high as the corn, and large rag weeds cover almost the entire soil, which rob the corn of the little nourishment that is left in the soil.

He feels a little rebuked at such things, and apologizes by saying: "One man cannot do everything on a farm. Haying and harvest came on too soon, and I was obliged to neglect cultivating my corn the second time. Therefore this will account for my premium weeds."

What are you experimenting with in that field? we inquired, where nothing but noxious weeds from three to four feet high could be seen.

"I sowed peas in that field, but for some reason they appear to be almost a failure."

Meadows appear impoverished, and yield but little hay, and pastures afford but a scant supply of grass, and he assures us that "farming is hard uphill business, and pays poorly enough."

A Renovating System Suggested.

The foregoing picture is one of very frequent occurrence. And now, seeing that we have found such a system of farm management to be faulty, we will suggest how it may be improved so that farming will pay better.

In the first place the manure must be applied to the soil annually, at least.

It is utterly useless to be economical of the productions of the farm, and convert them into manure, unless that manure is economically saved and judiciously applied to the soil. It impoverishes not only one field, but the entire farm to allow the manure to all be wasted about the barn and yards, just as much as it does to sell or allow everything that is produced on it to be carried off it, while nothing is returned to the soil to compensate for what one or more crops have exhansted it.

In the next place, a farmer on fifty acres of land needs a good hand constantly, or most of the time, at least. The labors of the farm at some seasons of the year all seem to require attention within a short period of time. But if they are not attended to in good time, it will be too late, and therefore loss will be the certain result.

Now, if this young farmer, to whom allusion has been made, had employed a good hand by the month or by the day, even at one dollar per day, and collected and saved, and hauled out all his manure in good time, and applied it to his corn crop, and had employed suitable help to cultivate and hoe his corn, and to keep the soil mellow and clean, every good farmer will acknowledge that his field would have produced two bushels of grain where he now gets but one, besides keeping the soil in a good condition, so that the next crop would be abundant, and there would be no deterioration of the soil. It is true there might be many days of unpleasant weather when a hand could not earn even his board; but if all the plans connected with the farm were well arranged, there would be some job on hand in the workshop or woodhouse, or barn, at which a faithful man could labor to good advantage.

So with other crops; if suitable help had been employed at proper times to prepare the soil, to get in the seed, to harvest and secure them, and the leisure days spent in making compost and in draining those wet portions of some of the fields where not half a crop can grow on account of too much water, a renovating system of farm management would have been instituted at once, and crops of all kinds would be in some fields more than doubled, and the cash value of the farm greatly increased, and the proprietor would not only have more clean cash for *his own* services after paying his laborers, but would have the satisfaction of seeing better crops grow on his farm from year to year, and he would *feel* better, and act better, and would actually be a better citizen, and would be more highly respected, not only by others, but by his own self and family.

Obstructing the Highway.

Here we pass a beautiful farm, and the fresh, thick grass, destitution of noxious weeds, and the smoothness of the fields assure us that field culture is well performed,

and we are about to enrol the proprietor's name among the enterprising and successful farmers. But as we approach the residence and outbuildings, which latter are on a line with the highway, we drop our pencil and grasp both lines, in order, if possible, to run the blockade without being capsized while passing along this gentleman's front barnyard. It is surely a spacious one! It extends from Lake Erie on the west to the Hudson river. But we would have no objections to that feature were the entire surface covered a foot deep with good manure. But when they come to collect the manure in this yard they find that it has been spread out over such a vast surface it is by no means a practicable job to collect even one-quarter of it.

Drive carefully and straight, for there is lots of rubbish! Every tool and implement is securely housed beneath the broad canopy of heaven. There are plows, three and two are five, and one tumbled almost into the beaten track; and there is an old ox-sled which to appearance has been carelessly left on one side of the way, as a remembrance of grandpa, one of the pioneers of the county, and here are old cultivators, several harrows, a roller, half rotten, horse rakes, hay riggings, a mower and reaper, wagons and other farm implements, in most complete *dis*order. Did it not cost so much to engrave such pictures, we would forward a pencil sketch to the artist, for insertion in the CULTIVATOR and Co. GENT. What a disfiguring blotch on this fine farm!

This picture is no uncommon one, for I saw scores of such spacious tool houses or apartments. It is very convenient to unhitch from a wagon or cart, and leave it on one side of the highway; but if a man will once make up his mind to have every tool and implement securely housed, he will always find it just as convenient to keep the highway unobstructed with agricultural tools and implements, and to have them all safely and securely housed when they are not in use. It is folly to plead anything in extenuation of the thriftless and *un*farmer-like, practice of obstructing the highway with tools and implements.

Want of Thorough Draining.

Notwithstanding nature has provided for the drainage of a large proportion of the soil of Monroe county, still there are very many fields which hardly pay the expense of cultivation, because there is such an abundance of surplus water. I noticed very many fields of summer fallow that were almost nothing but *lumps*, LUMPS, LUMPS; and in many places I saw farmers cross-plowing in September, when water would follow them in the furrows for several rods, and the furrow slices reminded us of huge slices of putty. It seems truly surpising that any one who has ever *heard* of the advantages and benefits of thorough underdraining should be so slow to improve his soil, so as to raise, in many instances, more than twice as large crops of any kind of grain or grass as can possibly grow without draining. I saw hundreds of acres of choice land, most pleasantly located, which did not pay the interest of three per cent., because it was too wet, but which undoubtedly would pay the expense of draining in the increase of the two first crops, and at the same time would require far less team labor and human labor to cultivate it if it were drained as it should be. In my next I shall speak of the agriculture of the Tuscarora Indians in Niagara Co. S. EDWARDS TODD.

SANDWICH ISLANDS.—We receive our exchanges from the Sandwich Islands as regularly as those from California. The *Pacific Com. Advertiser* of the 6th of March, says—"The bark R. W. Wood brought from Germany six fine pure-blooded Merino rams, all of which appear to be in the best condition, and are noble looking animals. These added to the late importation from Germany, will be an acquisition to our islands, and must result in greatly improving our wool, which is becoming a noticeable item of export." The same paper states that "the Emperor of France has added another testimonial of his respect for our Sovereign," by presenting to him four picked rams from the royal flock at Rambouillet, which are now on their way to Honolulu.

DOUBLE CROPS.

MESSRS. EDITORS—Having noticed much of late in the COUNTRY GENTLEMAN, about raising two or more crops upon the same ground at the same time, and believing it to be a practice of very doubtful utility, I am desirous of saying a word. And first, let me say my own experience has chiefly been confined to a few attempts at raising corn and turnips together. The invariable result has been this—no turnips. Now when I reflect that the combined action of different things is requisite for vegetable growth, I am not surprised. The turnips were deprived of at least two positive essentials to all vegetable growth, viz: light and air. If the corn had been planted six feet apart instead of 3½ feet, a fair crop of turnips would undoubtedly have been the result—that is, one half the ground in turnips and the other half in corn, one half of a crop of each would have resulted. In fact, have known a man to plant his corn five feet apart one way and then plant potatoes between the rows, the utility of which I have never been able to discover. The practice is very common in this section, of raising pumpkins with corn, but I believe if experiments were tried, this would be found to be poor policy. One thing I am certain of, is, if pumpkins were raised by themselves, so that they could have plenty of sun and air, they would contain much more nutriment and ripen much earlier. On the whole, is it not much better to raise one crop at a time on a field and not attempt to produce two, at a greater expense of cultivation and get but a half of each? G.

Livonia, N. Y.

[For the Country Gentleman and Cultivator.]

NEW SOILS.

It is a general impression in this vicinity, that new soils are far preferable for certain varieties of crops and roots, to old ones, and without doubt this is true; and that the cause of this superiority is certain chemical qualities which new soils contain to a greater extent than old ones. In digging a drain recently, in a lot which had been cleared perhaps eight or ten years, I came to the conclusion that it was not altogether owing to the qualities of the soil, but in a degree to the more porous condition of the soil, as I noticed every root and rootlet forms a natural drain from the surface to the under stratas of the soil, the roots being almost wholly decayed. All these arteries or pores were partially filled with water, and through these the surface was being quickly dried off. Of course, as the soil is worked and becomes older, these channels become filled up, making the soil late and cold, when it becomes necessary to drain. Does not this afford ample proof that draining pays? E. A. KING.

King's Ferry, N. Y.

[For the Country Gentleman and Cultivator.]

THE BUCKWHEAT QUESTION.

I learned when a boy that corn did not do well after buckwheat, but am confident the exhaustion of the soil is not the difficulty. That there is trouble somewhere there is no doubt. I incline to think that there is a poison about it for corn. The reason why I think it is not more exhausting than other crops, is that wheat or oats grow good on the same ground the next year after the buckwheat is taken off. On our new and strong prairie soils, you have no difficulty in telling where the buckwheat was grown by the appearance of the corn, especially the first part of the season.

I have known a number of crops of buckwheat to be grown in succession on the same piece of land, and give good returns each year. Mr. H. D. MAY, a man that looks into the whys and wherefores of things as much as any man among us, says that the chinch bug will not touch wheat that is sown on buckwheat ground at all.

Belvidere, Ill. A. MOSS.

THE CULTIVATOR.

ALBANY, N. Y., JUNE, 1862.

☞ The New-York State Fair is to be held at Rochester, Sept. 30—Oct 4, upon the Show Grounds of the County Society, within two miles of the Court House.

The State Fair at Rochester.—The Rochester *Union* of April 30, remarks with regard to the preparations now making in that city for the holding of the next Fair:

"The buildings are not to be mere shanties, but permanent and useful structures, costing some five or six thousand dollars. The State Society has never had suitable buildings for an exhibition, and after holding one here in such, it would be strange if it did not change its policy and hold its annual shows only where such buildings can be found. This may eventuate in the locating of Fairs at three or four points in the State, of which Rochester will, of course, be one. The buildings to be erected for the show this fall will be pretty sure to be used again by the State Society in the course of three or four years, and they will be used every year by the County Society. Let all who have an interest in the holding of Fairs here bear these facts in mind, and contribute liberally now to make a good thing for the city in the future.

☞ A visit at Rochester May 8th, confirmed for the most part the representations we have had heretofore as to the good prospect of the Winter Grain, as a general thing, in Western New-York. Spring crops seemed to have been put in, and, although behind-hand, are not too late to afford fair returns should the remainder of the season prove favorable. The fruit prospect is apparently unusually good—particularly for Peaches.

Our foreign intelligence, received during the past week, is not favorable for the crops in England or France. In the former country, the statements given in our last, remain mainly applicable to subsequent weather. The *Mark Lane Express* of April 21, one week later, reports little improvement in the prospect, and a slight rise in the price of Wheat, with the remark "that the harvests of 1860 and 1861 were seriously deficient, and that the present year will want very large supplies, the extent of which must depend on the time of gathering." In France, there has been a sudden change in the state of the crops, quite disappointing hopes previously entertained. The *Journal d'Agriculture Pratique* of April 20, accompanies the crop reports of its correspondents with the following remarks, which we translate for the Co. Gent.:—"A season prematurely early gave vegetation an extraordinary start. Then a cold turn, very severe for the season, supervened about the 12th of April; the frosts cuting off the young shoots of the plants and hazarding everything that was too far advanced. * * After three nights of successive frosts, the fruit crop, above all that of pears, is compromised, as well as that of the vine, the mulberry, colza, rye, and luzerne, while the wheat is also injured in some measure. It would be premature to endeavor to estimate the extent of the calamity. The rural population have often been alarmed at frosts, which nevertheless only caused disorders in vegetation, repaired by propitious weather at a later date."

☞ We are indebted to Mr. C. B. Miller, Proprietor of the Horticultural Agency, 29 Broadway, New-York, for a fine specimen of each of the following plants: The new double seedling Petunia, "*Gen. McClellan*—the best double yet produced, and for which the Brooklyn Horticultural Society has just awarded a special premium; raised by John Cadness, Flushing, L. I.—and of *Daphne Cneorum*, said to be the best hardy evergreen plant, free flowering and very fragrant, for which also a special premium was awarded to A. G. Burgess, East New-York, L. I." The McClellan Petunia is the finest thing of its kind we have seen. The Daphne is not yet in bloom, but will doubtless vindicate the correctness of all that Mr. Miller says in its praise. We commend both to the attention of our florist readers, and Mr. M. will please accept thanks for affording us, by his kind attention, the opportunity of doing so understandingly.

☞ The frequency with which we receive such assurances as the following, with respect to the Results of Advertising in The Country Gentleman, must be our apology for occasionally asking the attention to them, of Advertisers who wish to reach the Agricultural Community. Many of our Advertising friends who have written us to the same effect, or verbally asserted the same facts, and who have never seen any publication in our columns of their assurances,—can bear us witness that it is only a very few such letters, out of the number we receive, which we do lay before the public.

The letter from which the extract below is taken, comes from a firm who have for many years been constantly advertising in our columns. They say: "We are very well satisfied with our advertising in the *Country Gentleman*. We do not wish to underrate other papers, *but in truth and justice we are bound to say, after advertising in* at least one dozen Agricultural papers, *that our advertising in the Country Gentleman would bring us more custom* THAN ALL THE REST."

Manufacturers and dealers in Agricultural Implements, Nurserymen, Breeders of Improved Stock, and others, would consult their own interests, as it seems to us, by keeping the character of their business somewhat more constantly before the Agricultural public. We are constantly obliged to reply to inquiries from our readers, either privately or in print, which ought by good rights to meet with constant answer in our Advertising Columns.

Terms of Advertising in the Country Gentleman.

One Dollar per square of 16 lines' space, or less, each insertion.

Brief Business Cards, to be kept standing for a period of not less than Six Months, will also be inserted on favorable terms, according to the number of lines occupied.

Buckwheat and Wire-Worms.—A. G. Percy, in the Rural New-Yorker, states that he planted corn on land infested with wire-worms, dressing it with a barrel of ashes and lime per acre, after planting, to keep them off. When the corn was four to six inches high, the worms began to work, and in two weeks destroyed every hill. On the 28th of June he sowed the land to buckwheat, with a strip of corn through the same, to test the worms. He could see no difference in the quantity eaten; they eat from one-half to one-fourth of both corn and buckwheat. Winter wheat was the next crop; this was almost entirely destroyed. Oats followed, and gave a very heavy crop, entirely free from their ravages as far as he could discover. Mr. Percy remarks:—"The reason why there is obtained a fair crop of buckwheat on such land many times, is because said wheat is a very quick growing plant, and the worms get their living on the green roots of the grass which has been inverted but a short time."

☞ Mr. G. W. Marsh of Gaylordsville, Conn., sends us a specimen of the Mole Trap illustrated and advertised in other columns of this paper. If the Moles get caught in it, with as much promptness as we got our fingers pinched, it is a contrivance that can be recommended for great simplicity and efficiency.

☞ The Ohio State Fair this year is to take place at the city of Cleveland, Sept. 16–20. T. C. Jones, Esq., of Delaware, O., is President of the State Board; John H. Klippart, Columbus, Secretary.

☞ Hon. B. P. JOHNSON, United States Commissioner to the Great International Exhibition at London, is to sail in the steamer City of Baltimore, from New-York, May 31. Although Congress failed to make the appropriation asked for to assist American exhibitors on this occasion, which, if granted, would have enabled us to take an honorable and gratifying position among the other nations there represented,—a few of our manufacturers, inventors and artists have had the enterprise to incur the formidable outlay required, for themselves; and Col. JOHNSON will be present, as the authorized representative of the United States Government, to promote their interests and superintend the management of their contributions. We are glad to know that there will thus be a delegate from this country officially in attendance, since, as some of our citizens are present as exhibitors, they might be placed in an unpleasant position for the lack of any properly constituted medium of access to the Managers of the Exhibition and the English government, and since, moreover, the circumstances of the case afford so ample evidence that the public spirit of individuals is none the less active here because the time and means of the government are wholly engrossed by the "weightier matters" that now press upon their attention.

Col. JOHNSON's address will be in the care of Mr. W. V. MORGAN, Arundel-street, Strand, London, W. C., (postpaid.)

Hon. E. CORNELL, President of the State Agricultural Society, has also taken passage for the 31st inst. We bespeak, both for him and for Col. JOHNSON, the kind attentions of our Agricultural friends in Great Britain, and trust that among the other engagements and duties of the coming months, they may have the time to visit some of the more prominent farms and herds in England, Scotland and Ireland.

It is expected that Col. JOHNSON will return about the middle of September. As to the affairs of the State Society in the meantime, we copy the following paragraph from the number of Society's *Journal* just issued:—

"During his absence, Mr. S. R. EARLS, Assistant in the Secretary's Office, will attend to the duties of the office, assisted by Mr. JOHN HAROLD, Secretary of the Queens County Agricultural Society and General Superintendent for the Fair of the Society. Dr. HERMAN WENDELL, Vice President, and LUTHER H. TUCKER, Esq, Treasurer, have kindly consented to give their counsel and aid as may be desired; and other members of the Executive Committee have also proffered their services if called for. A committee consisting of Ex-President GEDDES, P. BARRY, Vice President, T. C. PETERS and E. SHERRILL of the Executive Committee, have been appointed to superintend all the erections and all the arrangements for the annual exhibition.

"All communications on the business of the Society may be addressed to the Secretary, Agricultural Rooms, Albany, as heretofore."

☞ S. N. GOODALE of Cleveland, O., in his Wool Circular for May, says:—"I hear of many lots in Ohio being contracted at prices ranging from forty to fifty cents, which would make them average forty five cents. I presume at these prices sellers will not look for a better market, as it is plain to see prices may be lower before they are higher. The State Agricultural Board have very generously offered eighty dollars in first premiums on wool, and less amounts in second and third premiums, at the Fair to be held in this city from the 16th to 19th of September next. Wool husbanding has heretofore been much neglected, and it is to be hoped that wool growers throughout the United States and Canadas, will respond by sending samples of their flocks. Any number desirable may be sent to my care, though not less than twenty fleeces of any one class of wools, may be entitled to premiums. The first class will consist of Felting, which usually embraces the finest Saxony and Silesian, with other grades; second, Delaine Wools; third, Cassimere Wools; fourth, Combing Wools."

CALIFORNIA.—A bill has been introduced into the Senate of California, for the "Encouragement of Agriculture and Manufactures," which appropriates the handsome sum of Eighty-four Thousand Dollars, to be paid in prizes for the introduction mainly, of new branches of cultivation—for instance, $1,000 for the first 10,000 lbs. sugar from Sorghum—$1,000 each for the same amount of sugar from the sugar cane and sugar beet—$3,000 for 1000 bales flax—$5,000 for 1000 bales cotton—$1,000 for 1000 bales tobacco—$1,000 for 1000 bales hops—$5,000 for 100 bales raw silk—and similar prizes for tea, coffee, rice, &c. Prizes of equal amount are offered for manufactures of cotton drilling, "burlaps," suitable for grain and wool sacks, calico, shirting, sheeting, broadcloth, &c. &c.

☞ The Franklin Co., Mass., Ag. Society, have raised over $20,000 to purchase more land for the enlargement of their Show Grounds at Greenfield, after which purchase they will own ten acres; and it is proposed, during the next Exhibition, to dedicate the field by appropriate exercises, for the purposes of the Society, and as an Agricultural Park.

☞ The Queens Co. Ag. Society is to hold its next Annual Exhibition (the 21st) at the Fashion Pleasure Grounds, in the town of Newtown, on Thursday and Friday, 18th and 19th of September. The Premium List has been much enlarged, and the show continues for two days, instead of only one as heretofore.

☞ It is stated that there has been sent from Vancouver's Island a pine spar of no less than 230 feet in length, to the International Exhibition, and that it will be erected in the grounds of the Royal Horticultural Society's Garden, to remain as a specimen of the arboricultural productions of that Island.

WATER IN BARN-YARDS. — For twenty-five years I watered my cattle at a stream of water about ten rods from my yard. Six years since I dug a well about twenty rods from the barn, and brought the water in lead pipe to the yard. It has run ever since, and I think now that I could not do without it. It will almost pay expense in a single year. J. S. Y.

MATCHING STEERS' HORNS.—S. C. Parsons, of New Boston, Mass., writes to the *N. E. Farmer*, that "the horns of steers while growing can be turned in any direction, by the continued use of a weight over a pulley, with very little trouble, and no injury to the steers." He used a two pound weight, passing a cord from the point of the horn to a pulley over head, and thence to another pulley where the weight would hang out of the way, during the time the steer was stabled one winter, and brought up the lopped horn like the other. Others tried the same plan with equal success.

THE SOUTH-DOWNS INVADING SPAIN.—We cut the following paragraph from the last number of the London Mark-Lane Express:—"Several South-Down shearling ewes and two shearling rams are about to be sent, from Lord Walsingham's flock at Merton, to Spain. It is strange to see the South-Down introduced into the headquarters of the Merino, but probably the Spaniards have discovered that there is nothing to be compared to a good cut of South-Down mutton."

THE COUNTRY GENTLEMAN.—I always do all in my power to procure you new subscribers, as I consider your paper by far the best agricultural journal published in the country. E. R. A. *West Roxbury, Mass., Jan.* 16.

THE AGRICULTURAL COLLEGE OF PENNSYLVANIA.—Dr. EVAN PUGH, President of this Institution, sends us the published report of the proceedings at a meeting of the Board of Trustees at Harrisburg, May 6. "Reports from standing committees showed that the affairs of the institution were in a prosperous condition, and measures were taken to secure a full statement of the financial affairs of the college, together with a history of the latter, from its origin to the present time, in order that, by their publication, the people of the State may learn by what means this State has succeeded in founding a flourishing Agricultural College, which is nearly filled to its utmost capacity, notwithstanding the disturbed state of the times, while all other attempts of a similar character have failed in this country.

"Among other things, a resolution of the board approved the action of the executive committee in applying to the last court of Centre county for a change of the corporate title of the institution, the Farmers' High School of Pennsylvania, to that of the *Agricultural College of Pennsylvania*, by which title the college will hereafter be designated—the reason for this change being that the latter name more properly represents the course of studies pursued in the institution, and associates it more intimately with agricultural institutions of the same grade in other countries, than does the former title. European farm schools are all of a very low order, whereas the course of study at this college is more extensive than at any of the European agricultural colleges."

IMPROVED STOCK IN WESTERN NEW-YORK.—Among the late sales of Short-Horned cattle by JAS. O. SHELDON, Esq., of White Springs Farm, Geneva, alluded to recently in the columns of the COUNTRY GENTLEMAN, are the following, to different parts of Western New-York:

The Duke of Oxford, by 2d Grand Duke (12961,) out of Oxford 20th; sold to CHARLES A. GARDINER, Esq. of Rochester. We understand that Mr. GARDINER'S object in the purchase of this bull, is mainly to promote as best he can, the improvement of the stock of his vicinity. It is to be hoped that the public spirit thus displayed may meet with the hearty co-operation of those whom it is to benefit.

2d Grand Duke of Oxford, by Grand Duke of Oxford (16184,) out of Gloster's Oxford, together with four females, to JAMES S. MCCALL, Esq., of Lyons, Wayne Co. Mr. McC. has just purchased a fine farm of 210 acres, and has procured these aniinals from Mr. SHELDON as the beginning of what he intends to be a first class herd. The good judgment displayed in his selections, together with the excellent character of his farm, and his own knowledge of, and fondness for Short-Horns, are such as to promise him a high degree of success.

Seneca, and a two-year old bull by the Duke of Gloster (11382,) out of "Josephine," to GEORGE A. DOWNING, Esq., of Palmyra.

Premier, a yearling by the Duke of Gloster (11382,) to Messrs. MORGAN & BROTHERS of Kiantone, Chautauqua county.

The above animals are all good ones, and from their promise and breeding must prove of great benefit to the neighborhoods where they go.

WOOL-GROWING IN CALIFORNIA.—S. W. JEWETT, formerly of Vermont, writes to us from California, that his "sons clipt from their flock last year, over 18,000 lbs. of wool; this year it will be somewhat larger, as their increase amounts to over 4,000 a year. They are in a fine grazing country, where there is no winter to prevent the green feed from growing luxuriantly; in that section there are no burrs to injure the value of the fleece. The sheep grow so large and fat that three-quarter Merinoes will yield six pounds of wool per head. Their flock now, of old and young, amounts to over 12,000."

GAGE PLUMS.—Prof. RENWICK is reported to have said, at the meeting of the Farmer's Club of the American Institute last week:

"It is a disgrace to the American horticulturists that they have not improved to a greater extent American fruits and flowers. Many of the native fruits of this country have been taken to Europe, and after being greatly improved by cultivation, returned to us. This is the case with the Gage plums, which take their names from Gen. Gage, who carried the original stock from this country to England. There are doubtless still great numbers of wild fruits and flowers of America. The Schuyler Gage plum, now very much esteemed, comes from wild stock growing on the Susquehanna river. Cherries grow wild and neglected."

One who undertakes to enlighten the public, should possess some slight knowledge of the subject about which he talks. The Green Gage plum alluded to by Prof. R., so far from being carried from this country to Europe, has been grown in France for more than three hundred years, it having been introduced into that country in the time of Francis I, from whose wife it received the name of Reine Claude. The Schuyler Gage, said to have "come from wild stock growing on the Susquehanna river," is a seedling of the Green Gage, which originated in the garden of Gen. Schuyler of revolutionary memory, in this city.

MEDIUM OR SMALL CLOVER.—A. B. Benham of Tompkins Co., who took the first premium on grain farms in in 1860, remarks as follows in favor of the medium clover over the large kind grown by some farmers:—"1st. The hay is of much better quality. 2d. The two crops can be secured at a season of the year not to infringe on our wheat harvest or our timothy haying, or the harvest of any of our summer grains. 3d, and most important of all reasons—By cutting it twice the same season, there is but very few of the noxious weeds that are so fast overrunning our lands, will mature seeds as soon as the clover seed; and this we may always rely upon, we are less liable to have small seeds in the medium variety." Mr. B. cuts the first crop about the last of June, and cures it nicely, making hay of excellent quality; the next crop is generally taken off in September for seed.

ROOTS OF CLOVER.—The Seneca Falls Reveille of April 26, thus speaks:—"We have before us a head and root of clover brought to our office by Mr. JOHN CROWELL of our town, which was dug on his father's farm, and which is decidedly the biggest thing of the kind we have ever seen. The root was 7 feet 10 inches below the ground, and passed in going that distance through three different strata of soil. Mr. Crowell informed us that this was not the only one of the kind growing on the same ground, and rather intimated that with care in digging much longer ones might be found."

TOP-DRESSING.—A correspondent of the Boston Cultivator tried an experiment with top-dressing a meadow at three different times in the year. The first was applied early in autumn, when the manure was comparatively dry, and before rain. Another portion sometime afterwards, when the soil was soaked. A third, the following spring. The first portion produced double the crop, well filled with timothy and clover. The second, (applied later and after the rain) did not yield so well. That applied in spring produced little effect, except to increase the "spire grass" at bottom. He thinks the best time is soon after the hay has been cut; last summer he manured a gravelly knoll at that time, from which the timothy was rapidly disappearing. By late autumn, the timothy had outstripped all the other grasses, and was green and fresh, contrasting strongly with the dry red top and spear grass in other parts of the field. The manure was compost, made by spreading a foot of loam and muck under the barn, where the cows were yarded over night, and plowing it once in two weeks,—an obviously excellent and economical practice.

☞ The Susquehannah Valley Ag. Society holds its next Exhibition at Unadilla, Otsego Co., Sept. 23, 24. President, S. G. CONE; Secretary, R. W. Courtney.

Inquiries and Answers.

WORMS IN THE HEAD OF SHEEP.—Our sheep have the grub in the head, and I wish to know the cause of it and a cure. M. WAGONER. *Harlemville, N. Y.* [The gad-fly, which causes this grub, lays its eggs in the nose during summer, and they hatch and pass up into the head. To prevent this result, smear the noses of the sheep with tar, (which insects dislike,) a few times, commencing before midsummer and extending into autumn. A good way to do it is to place the tar along a board or in a trough, and sprinkle salt over it. In eating the salt, the sheep get their noses capped with the tar. After the grubs have entered, expel them with tobacco smoke. Fill the bowl of a tobacco pipe half full and set fire to it. Place a strip of muslin over it, insert the tube or stem well up the nose, and blow through the bowl for a few seconds.]

WOOL IN THE STOMACH OF LAMBS.—I have lost several lambs within two or three days, and on examining them I find in their stomach, and in the intestines leading from it, lumps of matted wool (which I suppose they have eaten from the old sheep,) the size of a walnut to hen's egg. And also on their hind legs and rump a slimy substance. If you or any of your subscribers will inform me through the Co. GENT. or by letter, what I can do for my lambs to prevent their eating the wool, and what will help them after eating it, I shall consider you have done me a great favor. JAMES HARROWAY. *Richmondville, N. Y.* [We have no personal knowledge of this disease, nor do we know a remedy—although we are informed it frequently occurs. Can our sheep farmers give a remedy?]

THE EASY WASHER.—Can you inform the undersigned where he can obtain the washing machine called the "Easy Washer?" It is spoken of as an excellent machine, and the cost but $5. JOHN KING. *Dubuque, Iowa.* [We cannot. Its makers would advance their interests by advertising it in this paper.]

"THE EASY WASHER."—Inquiries for this machine continue to come in. We can only repeat what we have heretofore said, that we do not know where it can be had.

POULTRY BOOKS.—You advertise some Poultry books. Please tell me if there is anything in either about hatching eggs by artificial heat, with the Author's price. JAS. STANDISH, JR. [In Bement's Poulterers Companion—price $1.25, you will find a full account of all the methods of hatching eggs artificially, with numerous illustrations. For sale at this office.]

SORGHUM SYRUP.—I hope you will give us all the information you can in regard to making syrup and sugar from the sugar cane. There were several hundred gallons made in and near this neighborhood in 1861, but we lack knowledge in regard to the manufacture of syrup and sugar too, particularly about clearing the syrup. A. L. *Monmouth Co., N. J.* [We shall be pleased to hear from any of our readers who can furnish reliable information in answer to A. L.]

RAISING PINE TREES.—I am desirous of encircling my orchard with a strip of pines; can you inform me where I may get the seed, and when and in what manner I may plant them? The particulars through the columns of your valuable paper will greatly oblige a subscriber. N. *Nassau.* [The difficulty of raising young pines from seed under our hot suns, renders it cheaper to buy them of nurserymen, at small size, and by the 100 or 1,000. The Norway Spruce and Scotch pine are most easily and cheaply obtained, transplant easily, and grow vigorously.]

STUMP PULLER.—Can you inform me where I can get a machine for pulling out stumps? What is the most approved patent, if there are more than one? At what price can one be furnished? Any information you may be able to furnish me in reference to this matter, will be thankfully received. J. L. *Newton, N. J.* [Our correspondent had better address J. A. NASH, 37 Park Row, New-York, who will furnish him all the information he desires on this subject.]

REMEDY FOR SHEEP TICKS.—We may state in answer to an inquiry, that Arms & Co. of Boston, keep for sale an extract of tobacco, which Mr. J. S. GRENNELL of Greenfield, says is the best thing he has "ever knewn to destroy vermin on cattle or sheep. It costs 75 cents per pound, and dissolved in water at the rate of an ounce and a quarter to a gallon of water makes a wash fatal to ticks. Lambs may be dipped in it, but for old sheep with heavy fleeces, I pour it on the back from an old tea or coffee pot, allowing a quart to each sheep, carefully parting the wool along the back. This will destroy a great many, so that they will go till shearing time. This extract of tobacco contains all the strength of the article, and is so convenient, so cheap and so effective that it should be in the hands of every farmer. Lambs should be thoroughly dipped about a fortnight after shearing, when the ticks will have left the old sheep for the more effectual shelter of lamb's wool."

SOILING CATTLE.—Many of us farmers and fruit growers stand in need of much more stable and barn-yard manure. Our distance from the cities renders it impracticable to purchase it; so we are compelled to try and increase our stock of the home manufactured article. One of the first plans suggested is the system of soiling. We know that will increase the manure pile, but it has not been tried in this section, and we know of no instance of success. We would be glad to see detailed in the COUNTRY GENTLEMAN some successful experiments by which bullocks have been kept healthy, and fattened into first rate beef—also successful dairy management under that system. Our doubts are only in regard to the health and comfort of the animals. We are satisfied that the manure will pay for the additional labor, and more. In this enterprising country the people generally adopt plans that are known to pay. If soiling is economical and practicable, why is it not more generally adopted? T. M. H. *Chester Co., Pa.* [Will some of our readers who have had experience in soiling, answer the above?]

DISEASE IN LAMBS.—In Co. GENT. of April 24, I notice the inquiry, "What ails my Lambs?" I wish to make the same—what ails my *Lambs?* I have lost several already, down dead. The glands of the throat are so enlarged as to compress the windpipe so that there is no air passage, and in some cases they never breathe. Upon opening the throat, the blood will be found to have settled there. The swollen glands form "bunches" under the throat; but in cases that live ten days they out-grow it. Some may linger along a few hours and then die—perhaps one day. Some three years since I lost several lambs in the same way; none of my neighbors had any cases similar. This year, I have heard several complain of loss of lambs. This day is the first that my sheep have been outside the yards, and only for a few hours to-day. Are other flocks thus afflicted? Do I keep my sheep too much confined, or feed too high, or not grain enough? My sheep are in *high condition.* J. J.

STEEL PLOWS.—In answer to M. H. H.'s inquiry in regard to steel plows, I would say that they have been thoroughly tested in this vicinity, both upon the black sticking soils of the Mohawk Valley, and the cobble-stone upland adjacent, and they give very general satisfaction in both. I have worked and seen worked many of them, and have never known them to clog in any case. As to the durability of steel compared with iron points, very much depends on the temper given them. A steel point of good material and well hardened, will do about twice the labor of an ordinary cast iron one, but if not thoroughly hardened, is but little if any better than cast iron; but in any event he may rely on the earth rolling clean from steel in soil in which an iron plow would load very heavily. D. D. DEVOE. *Ilion, N. Y.*

WHAT IS THE BEST GRASS FOR OVERFLOWED LANDS.—A small portion of my farm, on the bank of the Mississippi, is subject to overflow from the river in times of high water—about once in each term of three or four years. The land is rich bottom land, and when the water overflows, it remains on the land generally from ten to twenty days. The land has never been cultivated, and I wish to get it seeded down to grass, suitable for early mowing and fall pasturing. Will you or some of your experienced readers, inform me what kind of grass seed (or a mixture of grass seeds,) is best for the purpose, (so as not to be much affected by the standing water, &c.,) the best time of year to sow the seed—whether to sow the seed with oats or other grain, &c.? D. Muscatine, Iowa.

A KICKING HORSE.—I want to inquire of your numerous readers about a horse which I have—a gelding about twelve years old, large size, and has been used quite steadily on my farm, well kept and worked. About one year ago last December, he commenced kicking in harness and stable, sometimes one foot and sometimes the other; the motion was quite similar to that of driving off flies, with generally a switching of the tail, and has continued to the present time. His health appears good. I wish to find the cause and the remedy, and if any of your numerous readers can inform me, it will be thankfully received. B.

PLANTING NUTS.—Tell your friend, Newton Ransom, if he will plant his nuts in the fall, they will germinate some time during the following season. If he wishes to plant them

where he intends the future trees to stand, put two or three in one hill, and if more than one out of the number planted should germinate, they can be easily removed without injury to the one he wishes to leave for the future tree, if done as soon or soon after the plant makes its appearance above the ground. A SUBSCRIBER.

POULTRY BOOK.—Where can I obtain a work on Poultry, with fine colored engravings of fowls, and the price of the work? C. B. [There was an edition of Bement's Poulterer's Companion issued with colored plates—price $2.50. We think however, that it is now out of print. C. M. Saxton, New-York, can probably furnish you with some foreign work on the subject, with colored illustrations]

WORKS ON WINE MAKING.—*J. E. M., Portsmouth, R. I.* There are English and French works on this subject, to which we cannot refer you in detail, and which could probably only be had by importing them on special order. Several American works on the culture of the Grape have chapters on this subject, as, for example, the latest, PHIN's, just published by Saxton, New-York; but none of them arrive at anything like a treatise on the subject. The Patent Office Ag. Report for 1860 has one of the fullest essays on Wine Making we remember to have seen, of 37 pp., consisting mainly of translations from the recent and best foreign works. We can procure this book for you at a moderate price, if you cannot get it at home.

WOOL AND BONE EATING.—In number 20, vol. 19, page 316, 3d column, C. H. R., asks why sheep eat each other's wool; may it not be for the same reason that cows try to eat bones, described in vol. 18, pp. 140, 172, 236? Ask him to try salt with some and bone dust with others, and report the result to your paper. F. H. A. *Yates county.*

A KICKING HORSE.—A case as described by inquirer B. in the COUNTRY GENTLEMAN of May 8, happened to a horse of mine lately. He died suddenly, and proved to have the botts. Of course the best remedy for such a case is generally discovered when the animal is dead, which is said to consist in taking a good dose of blood from the horse and get him to drink it, being the food after which the botts are hunting, and which at the same time, acting as a physic, carries off the tormenting botts. This is not my own experience, but that of my neighbors, in whose advice I have reason to put faith. JOHN. F. HILLMAN. *South Amboy, N. J.*

STEEL PLOWS.—In Co. GENT. of May 8th, M. H. H., Onondaga Co., makes some inquiries about steel plows. I have used steel plows for the last 6 years, now manufactured by L. S. Sammons of this place; have used them on all kinds of soil, and have found no place where they will clog, if kept bright and clean and not allowed to rust. He wished to know how the steel point compared with the cast point. I have used both cast and steel points, and think that a steel point, if properly hardened, will last much longer than a cast point. I can plow 100 to 150 acres with the steel point, by having it sharpened two or three times. L. S. STANDRING.

[For the Country Gentleman and Cultivator.]

Cost of Corn Crop in Massachusetts.

MESSRS. EDITORS—I saw a statement in your Co. GENT. of April 17, referring to the cost of raising corn in New-York, and now I wish to show the cost of raising corn upon the hills of Western Massachusetts. The piece which I refer to, consisted of three acres, which had been mowed for three years previous. It required one yoke of oxen and a man and boy to plow it:

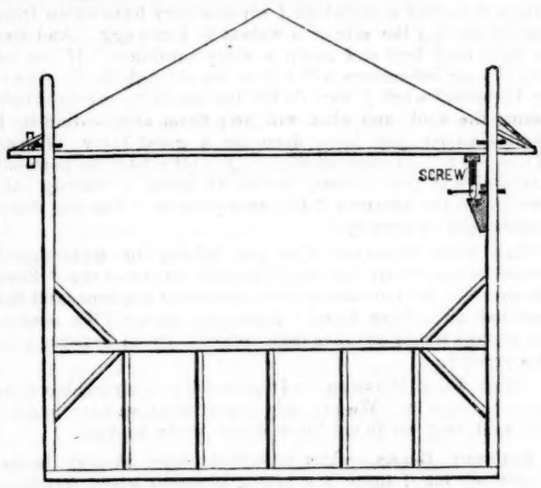
Three days work plowing and spreading manure,	$7.50
Three days drawing manure,	3.50
Harrowing,	2.00
Half day planting with machine,	1.00
Three pecks seed corn,	.75
Interest on land at $30,	6.30
Cultivating one way three times,	1.75
Eight days hoeing,	5.00
Two days cutting,	1.50
Husking and drawing corn and stalks,	8.00
Thirty loads manure,	15.00
Total cost,	$52.30
Cornstalks,	15.00
	$37.30

One hundred and sixty bushels of shelled corn at a cost of about 23 cents per bushel, showing that corn can be raised to some advantage upon the rocks of Western Massachusetts. H. H. P. *Shelburne, Mass.*

[For the Country Gentleman and Cultivator.]

CONSTRUCTION OF HAY BARRACKS.

The old fashioned barrack, as it is called, is built twenty feet square. Four posts of durable timber, twenty-two feet long, four feet to be inserted in the ground. The stick should be sufficiently large to square eight inches—the corners hewn off, making it partly octagon in shape—one and a half inch holes should be bored through the corners of each of these posts, one foot apart, for the bolts that support the roof. They should be made of one and a half inch iron, one feet in length, the outer four inches to be squared and turned up one inch, on which is laid a piece of joist, three feet long, to support the roof. The roof should run to a point from each side, and may be covered with shingle, tin, or thatched with straw.



There are four plates framed together, and braced. The posts pass up through the roof on the inside corners of the plates. The roof is elevated and lowered with a small screw of wood or iron, about two feet long. A wooden screw three inches in diameter will answer. This is used on the inside of the post. One man can raise and lower the roof if it is done as fast as the hay is put in or taken out. Raise each corner of the roof one foot at a time, going regularly around the barrack. The roof will not be likely to blow off, if the above directions are followed in building. The posts, as far as they enter the ground, may be left the full size of the stick.

The best way to build a barrack, is with sills and girts seven feet from the sills, and braced. You can fill it from the ground or hay poles on the girts, and have shelter under for sheep or cattle. I make a rough sketch of a frame barrack, side view, which is given above.

Millerton. J. D. KERLEY.

[For the Country Gentleman and Cultivator.]

THE BEST WAY TO APPLY MANURE.

Twenty yards of manure can be put in the hills on an acre of corn ground easier than spread *evenly* over the surface. It will hinder the team longer, but save enough time in weeding to pay twice. I think it will increase the crop twice as much as if harrowed into the surface, or three times as much as when plowed under.

Sixty to eighty yards to an acre can be pretty well spread, easier than put in the hills. If harrowed into the surface, it *may* produce as good corn and leave the land in better condition for a subsequent crop. If plowed under, I doubt whether it will do either.

If you want reasons for my opinions I can give them. [Shall be glad to receive them..—EDS.] S. W. COE.

Mantua Station, O.

HYDROPATHY IN THE GARDEN.

The title of a farm article in your journal of last week, suggests a few remarks concerning the use of water in the garden. There is no doubt that a great many people make much unnecessary work for themselves by watering their flowering plants when they do not need it. They seem to think that the moment the soil begins to look at all dry that they must begin to water, and out comes the watering-pot, and each plant receives a little dribble, moistening the surface of the ground and doing about as much good as to spit on the plant. Now it by no means follows that even if the soil be dry a couple of inches from the surface, that plants require watering, for well established plants have their roots running deeply into the ground, beyond the reach of harm from any ordinary drought. Very small plants newly set out, or young seedlings, may need moderate waterings every two or three days if the weather be dry.

Whenever it becomes necessary to water established plants, do it thoroughly, and give them such a soaking that they will not require another in a week. Frequent waterings harden the soil around plants, rendering it impervious to ordinary gentle showers and dews, and excluding the air from the roots. If the number of plants is not too great, it will be better to make a little trench around each one, pouring the water into that, and then drawing the soil over it. By this means your will avoid the caking of the soil consequent upon the ordinary manmanner of watering. G. B. H.

YOUATT AND DADD ON CRIB-BITING.

Having a young and valuable horse, which has taken to the habit of late of cribbing, I write to inquire the cause and remedy. Will you or some of your correspondents report through the Co. Gent., and oblige A Reader.

Writers differ as to the cause, and have found no good remedy. Youatt thinks it is often the result of irritation; more frequently of idleness; and sometimes is caused by grooming the horses in the stables. He thinks the horse, in cribbing, draws in air and swallows it. Dadd, on the other hand, denies that an animal can ever *swallow* air alone. Youatt thinks it a serious defect, and constitutes unsoundness; Dadd thinks it only a habit or vice, and does not otherwise occasion any injury. Youatt says "the only remedy is a muzzle, with bars across the bottom sufficiently wide to enable the animal to pick up his corn, and to pull his hay, but not to grasp the edge of the manger. If this is worn for a considerable period, the horse may be tired of attempting what he cannot accomplish, and for a while forget the habit; but in a majority of cases the desire of crib-biting will return with the power of gratifying it." He says the desire of crib-biting will return with the power of gratifying it." He says other attempts have failed, such as lining with iron, smearing the edge of the manger with tar or aloes, or as some have proposed, turning out. He has seen a horse gallop across a field for the mere object of having a grip at a rail. Medicine is only thrown away. Dadd recommends that the space between the bottom of the hay-rack and the outer edge of the manger be boarded over, forming a steep inclined plane, leaving no edge on which the horse can fix his jaw. A slide is opened only at meal time. He rubs bar soap on the outside of the crib, as a preventive.

We give these views for what they are worth, and shall be glad if some of our readers can furnish something better.

[For the Country Gentleman and Cultivator.]

Making Apple Trees Bear Every Year.

Messrs. Editors—Many of the readers of the Country Gentleman, who have large apple orchards, have no doubt found it very unprofitable to wait for what is termed "the bearing year." I have noticed that from the excessive productiveness of this tree, it requires the intermediate year to recruit itself—to extract from the earth and atmosphere, the material to produce again. This it is unable to do unassisted by art, while it is loaded with fruit, and the intermediate year is lost. If, however, the tree is supplied with proper food, it will bear the next year; at least such has been the result of my experience and personal observation.

It is a fact well known to all, that the trees receiving the best care, are most likely to bear every year. Three years ago last fall, one of my neighbors, D. Denise, having two orchards of about two hundred trees each, tried an experiment on one of them. The "modus operandi" was by drawing muck from a piece of low land, formerly a black ash swamp, and dividing it among his trees, giving to each tree two-thirds of a cart-load, or two loads to three trees. This not being the bearing year for either orchard, the experiment was a fair one, resulting greatly in favor of the trees which received the muck—so much so that a second application of this kind of muck was made in the fall of 1860, differing from the first only in quantity—this time giving to each tree one load, and applying the same to both orchards. The succeeding fall they were literally bending to the earth with the finest fruit I ever saw, while other orchards in the same neighborhood produced scarcely half a crop. When this experiment has been thoroughly tried, I think it will be proven that the apple has in reality no alternate bearing year, but that it only requires food and nourishment to support it, to produce fine and abundant crops every year. Brother farmers try it, and report progress. E. J. H.

Concord, Mass.

RHUBARB VINEGAR.

It is well known that French vinegar is superior to all other vinegars, it being in a great measure made from the grape, with the assistance of a little sugar. Most vinegars used in this country are adulterations or mixtures of French vinegar, pyroligneous acid, malt vinegar, acetic acid, &c.; and these mixed up are sold in many cases as genuine French vinegar. Rhubarb is sometimes used in making British champagne; and in this way it has been discovered, in cases of failure (the wine becoming acid,) that the vinegar produced by the acid fermentation progressing is very much like and has the pungent taste and flavor of French vinegar. In preparing and making this vinegar there can be nothing more simple, and as rhubarb is now in season, and vinegar of common use in every family, it can be easily and conveniently made; besides as the price of a bottle of good vinegar is charged at 9d. to 1s. to families, it certainly is worth consideration the manufacturing of it, not only on a large scale but by private families, the process being so simple and the cost per bottle so small. This description of vinegar can be made, exclusive of labor or trouble, for something like 10d. to 13d. per gallon, and has more flavor than malt vinegar, and is easier made. The process for ten gallons will be, for a family: Take 25 ordinary sized stalks of rhubarb, pound them or crush them with a piece of wood in the bottom of a strong tub, add ten gallons of water; let this stand 24 hours, strain off the crushed rhubarb, and add 18 lbs. of sugar free from molasses, and a teacupful of best brewer's yeast; raise the temperature to 65 or 68 deg., and put your browst into a 12-gallon cask; place it in a position where the temperature will not fall below 60 deg. In a month strain it off from the grounds, returning it to the cask again, and let it stand till it becomes vinegar. For a large quantity follow out the common process of making vinegar either with malt or sugar, by adding rhubarb, which gives flavor and pungency.—*Scottish Farmer.*

The best way to keep food on a weak stomach is not to bolt it down.

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